



Auckland

Greenfield & Brownfield

Housing Development Land

The Opportunities and Barriers to Unlocking its Potential

STUDIO
D4

PROPERTY CONSULTING
DEVELOPMENT MANAGEMENT

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Executive Summary

SD4 have been commissioned by the Ministry of Business, Innovation & Employment (MBIE) to gain a better understanding of the opportunities and barriers to unlocking the potential of greenfield and brownfield land for housing development in Auckland.

The report starts by providing a very solid base of property market economic fundamentals, which have driven the Auckland housing market. The principles of supply and demand needing to be balanced, otherwise they will affect price, are discussed in detail relative to specific examples of the Auckland Housing market.

Auckland grows by 15-40,000 people pa, resulting in a requirement for an extra 8,000 – 14,000 dwellings pa. The application of the Regional Growth Strategy and the rigid MUL between 1998 to 2013, without sufficient up-zoning of brownfield land, has created a substantial housing supply shortage, such that in 2013, demand exceeds supply by some 20-30,000 households. The shortage of land and housing supply has had a dramatic impact on price, such that housing affordability in Auckland is now at chronic levels. Unless affordability is addressed quickly, much of Auckland's workforce will not be able to afford to live here.

Providing sufficient brownfield and greenfield land is considered critical in redressing the supply – demand balance, that has become so out of skew in Auckland in recent years. This report considers land supply in depth and provides a large amount of examples and practical suggestions on how supply can be increased from present levels. The Housing Accord is considered the key enabler of the initial land opportunities and until the Unitary Plan takes effect. Special Housing Areas (SHA's) are the areas that are expected to fast-track supply.

The future supply of greenfield land within the Rural Urban Boundary (RUB) land area is considered in detail, and where SHA's could be applied. The response from the various land owner types within the RUB areas will have the greatest impact on whether the intended SHA land will be available for housing in a timely fashion. After review of a series of drivers likely to have greatest impact on land owner behavior, SD4 concluded that the following had the greatest impact on land availability:

Factor 1: The size of the land parcel of the rural property, land area m².

Factor 2: The improvement value (IV) of a property, relative to capital value (CV)

Factor 3: The relative capital value of a property, \$/m².

The larger land parcel holders, with least improvements and high capital values of their land, were likely to be most encouraging of urbanization. Conversely small lifestyle block owners with a large house are likely to resist urbanization, and will not likely give up their land for sub-division in the early years. Detailed Maps are provided, highlighting the development potential of every property parcel within the RUB, following a formula of the above factors.

The report provides a detailed assessment on where the initial greenfield land maybe made available quickly. The fastest areas will be accelerating those areas already within the MUL, followed by Hingaia within the RUB, areas of Westgate and Silverdale. Whilst the area between Drury and Pukekohe has the largest RUB area, this area will present some challenges as much of the land within this RUB area has been subdivided into relatively smaller parcels. A fine grained approach is suggested for this area, to identify areas to commence SHA work.

The report concludes by considering methods by which to prevent urban land owners from collecting super-profits from zoning changes. A number of tools are suggested, for further review. The report concludes with a series of priority areas for action.

Key Messages of the Report

Auckland keeps growing; Council need to upzone brownfield, otherwise it's greenfield!

Auckland's population is growing by 1-2.5% pa. The Auckland Plan is considering an extra 400,000 households in 30 years. The actual rate of growth is not important, Auckland Council must plan for the growth, and if it wants anything in excess of 50% intensification, must up-zone extensively and take every opportunity offered. All brown-field opportunities missed, will need to be provided in greenfield.

Housing supply has a critical balancing act on house pricing

New housing supply must come close to matching demand at all times, otherwise the shortage quickly leads to price increases. There needs to be a consistent supply of housing, across all price points, to match the annual increases in household formation. The increased supply of new housing in all price points (its irrelevant whether this is greenfield or brownfield), will create a "move-up buyer" to the new product, which then creates sufficient lower priced existing housing stock.

House prices have risen dramatically due to a shortage of land.

The constraints on land supply imposed by ARC's RGS and the MUL, has had a dramatic effect on property prices in Auckland. The RGS has attempted to muddle with the age old theory of *supply and demand affects price* **and failed**. To provide house price stability, Council's need to have sufficient flexibility to ensure overall development land supply matches demand. Key Council staff need to intimately understand land supply and demand issues; and price effects.

Development economics are reviewed: land prices are too high; few infill sections left; terrace housing provides opportunity; substantial up-zoning required for apartments.

1. High land prices have led to \$600,000+ min greenfield house prices. Land is 50%+ of cost.
2. Greenfield housing needs land at 25 - 35% of (GST excl) sale prices. Section prices have to drop to \$80-120,000 for more affordable green field housing.
3. Infill housing has become very difficult in Auckland, as most of the easy picking sections have already been subdivided and built on.
4. Duplex and terrace housing has substantial prospects for many parts of Auckland, as long as there is sufficient up-zoning by Auckland Council, across all areas of Auckland.
5. Low rise apartments have higher relative construction costs and are sensitive to high land prices. Good in market attractive areas, viability hard in low house sale price areas.
6. Mid-high rise apartment provides better site utilization, allowing Council's intensification targets to be met, and better developer economic fundamentals.

The Housing Accord can immediately unlock rural land; It's dependent on 3 key factors

The first task will be to identify potential SHA sites and areas within the RUB. Development chance will depend on 3 key factors likely to influence land owner acceptance of urbanization:

Factor 1: The size of the land parcel of the rural property: the larger the parcel the better

Factor 2: Improvement value (IV), of a property relative to capital value (CV); high IV=hard

Factor 3: The relative CV, \$/m². Higher value sites will likely be developed earlier.

SD4 has produced a mathematical formula of the above, to Map the development chance of every parcel within the RUB, showing where RUB development is most likely.

There are MUL and RUB areas that can be unlocked quickly, some using SHA's.

1. Areas within the existing MUL present easy opportunities and should be fast-tracked.
2. Hingaia Peninsula is part inside the MUL, with 300Ha out. SHA the outside for fast results.
3. Drury and Pukekohe has large RUB areas but fragmented small sites: find suitable SHA's
4. Westgate, Hobsonville and Whenuapai has good potential, good transport, large Titles
5. Silverdale West provides good large site potential, Dairy Flat more fragmented

There are tools that can be utilized to unlock future development land.

Tool 1: Providing sufficient greenfield sections, starting at a price of \$80-120,000. It sounds a challenging task, but the Report shows it can be done.

Tool 2: A Council Rates regime that encourages land owners to make their property available for development, when Council spends huge \$ on infrastructure.

Tool 3: Value capture mechanisms: use uplift in rural land value on infrastructure. Allowing greenfield land owners to be paid fairly, but avoid the "super-profits" when land is re-zoned.

The following priority areas for action and areas of investigation are recommended by SD4, as a continuation of the foundations laid out within this report.

1. Auckland Council and Central Government need to develop a greater detailed understanding of land-owner behavior in greenfield RUB areas; further develop SD4's land owner categories and carry out detailed case studies. Understanding Appendices 5-7 should be a good start.
2. The initial SHA areas should be identified within the key RUB areas. Council should be well resourced to assist SHA site owners with their master-planning approaches as envisaged by the Housing Accord legislation.
3. There needs to be a far greater understanding of supply – demand and price economics within Councils
4. For Auckland Council to come close to it's Auckland Plan intensification targets, far greater brownfield land up-zoning is required in Auckland where people actually want to live
5. A detailed study is suggested on existing house price values when an area is up-zoned, using NZ and international examples, Use this not for value capture, but to provide better communication to NIMBY's.
6. Auckland Council should consider carrying out a detailed review of the potential of the rating regime suggested in section 10.2. Council should review their previous application in NZ (if any). There will be similar international examples, which should be evaluated and compared for its potential Auckland adaptation.
7. SD4 is aware that Auckland Council has initiated a detailed study of the costs of infrastructure to greenfield developments. SD4 suggests utilizing this information in clearly sign-posting what development levies should be paid in each of the RUB areas. This is then able to be considered by land developers in ascertaining the price to pay for the raw land that they intend to purchase.

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1.0 Introduction and Context

Auckland housing supply is a priority for the government. The Ministry for Business Innovation and Employment (MBIE) has commissioned Studio D4 (SD4) to gain a better understanding of the opportunities and barriers to unlocking the potential of greenfield and brownfield land for housing development in Auckland. Auckland Council have assisted in providing a series of maps, run through the Council GIS system, relative to key factors provided by SD4.

The report starts with reviewing the property economics applying to the Auckland housing market, the supply and demand issues and how they affect price.

Section 3 then looks at the development economics applying to all development forms, from greenfield housing, to infill housing, to terrace housing followed by apartment buildings.

Section 4 considers the context of the Auckland planning regime in the last 15 years, the formation of the Regional Growth Strategy, the MUL, and the effect of land shortages on the housing market and house prices.

Section 5 looks at addressing the supply and demand imbalance in an attempt to stabilize the property market and pricing. Section 5 then looks at what type of occupiers Auckland will have during the next 30 years and what types of housing typologies they may desire to live in.

Section 6 provides a series of case studies and examples of how the Auckland housing market has been impacted by land supply constraints, land prices and values just inside and just outside of the MUL and what type of development has occurred, due to the high section prices.

Section 7 looks at how we can provide a substantial amount of greenfield and brownfield land going forward. We look at how much land is required to keep the housing market in balance and how the Housing Accord can be the key enabler to fast track supply of land.

Section 8 looks in detail at the types of property owners in the greenfield RUB areas and key factors likely to influence land owner behaviour when faced with urbanization pressures. Many owners on small lifestyle blocks will likely resist the change, whereas others will welcome the change of use.

Section 9 considers the infrastructure requirements in both brownfield and greenfield. Someone has to pay for the infrastructure, who should this be?

Section 10 looks at what future tools are available to encourage land owners to behave as Central and local Government would like them to. How can greenfield sections be supplied for \$100,000, leading to new houses available at \$400,000? We also review rating systems that encourage owners to make their property available for development and development levies to assist paying for greenfield infrastructure.

The report concludes with a series of suggestions for action and further areas of investigation.

2.0 Property Economics Applying to the Auckland Housing Market

2.1 Quantifying the Auckland residential housing stock

As at the latest (2006) Census, Auckland had 439,083 occupied households, and 37,329 un-occupied or under construction households, with a total population of approx. 1,303,068 people. This equates to approx. 2.97 people per occupied household.

By February 2012, Auckland's population had grown to 1,500,000.

The long term trend in Auckland has been for people per household to decrease, (i.e. one and two people households have been rising faster than 4 and 5 people households). However in the latest economic downturn, and the resultant limited increases in housing supply, has caused a rise in people per occupied household to just over 3.

In any given year, Auckland has 4-12,000 new dwellings-houses built a year. This includes replacement of existing houses, so the total extra houses is between ½ - 3% of total housing stock. With population growth of 15-40,000 people per annum, the required Auckland new dwellings is considered to be 8-14,000 pa. During the last 5 years there has been 3-5,000 new dwellings built pa, such that there is a current considered Auckland housing shortfall of 20-30,000 dwellings.

2.2 Demand issues effecting the Auckland housing market.

Auckland, like most housing markets, is driven by the quantum of household occupiers. The wider Auckland market is principally a "primary household market", whereby most of the household occupiers live most of the time in their Auckland residence.

There are some 2nd or holiday homes on the Gulf islands (mainly from people with 1st homes in Auckland), and there are some people who may have out of Auckland homes and use their Auckland residence for when they come to Auckland. However the impact of 2nd homes in Auckland's total housing stock is small, so for this report we will assume that most of Auckland's housing stock is for 1st or primary residence occupiers.

The main areas of increased demand for Auckland housing comes from the following 5 factors (SD4 believe they are in the correct order of significance (1st to 5th), although this does change year to year):

1. **Increasing urbanization:** a move from within provincial NZ to the bigger cities, especially Auckland, essentially internal migration.
2. **More births:** Auckland's population has a higher birth-rate than most other NZ areas.
3. **Less deaths:** People across NZ are living longer than the decade before, there are more births than deaths.
4. **More immigrants settle in Auckland:** Whilst Auckland has about 35% of the wider NZ population, approx. 65% of immigrants end up settling in Auckland
5. **Long term trend of less people per household:** Excepting a "blip" in the last 5 years (due to what many believe is severe affordability issues in Auckland), the number of people per household has been decreasing for the last 50 years. There are many more single occupant households, more couples without kids, single parent families etc.

Some people make comments, such as "why does Auckland have to have more people?"

The reality is that the above issues are major long term trends. Even if Central government was to implement major government policies discouraging living in Auckland, eg provide as many central government jobs away from high residential growth areas, or try and make immigrants settle away from Auckland, these policies only partly work. Auckland is the power-house of NZ's employment creation, and for the last 50-100 years, Auckland has had consistent high levels of population growth.

The internal migration to Auckland trend can be countered by a worsening of housing affordability. If or when housing affordability gets so poor, existing residents will move out and potential new residents can't afford to live in Auckland.

When we sum up all of the above, the end result is that Auckland grows by an average of 1-2.5% people pa, or an average of an extra 15-40,000 people pa. Auckland Council has considered low, medium and high population growth scenarios. There are substantial amounts of historic research that show that during the last 20-40 years, Auckland's actual population growth has been in excess of earlier high growth projections.

In the end, barring a natural disaster, such as a major volcanic eruption, it is almost certain that Auckland will continue to grow at 1-2.5% pa for the next 20-40 years. The rate of growth is not critically important. The 400,000 extra households considered required within the next 30 years, may occur in 25 years in an above high growth scenario, or 40 years in a low-mid growth scenario. The extra households are still required, it just might take a few less or more years.

2.3 What are the total household occupier drivers in the Auckland market?

The total of occupied households is driven by a series of factors. Whilst it is a complex issue to try and accurately assess their exact individual impact, the following chart aims to assess factors which have a household occupier declining effect, and which factors will cause an increase in household formation.

Household Occupier Decline	Prosperity	Relationship	Health
Leaving Auckland for other NZ areas	Affordability		
Leaving Auckland for overseas	Opportunity		
Young Family members moving back home	Affordability	Break up	
Single people → couple → move in together	Affordability	2 houses to 1	
Ill Health; Move to rest care			Rest care
Elderly: quit home to live with children	Affordability		Better care
Death; leading to deceased estate			Deceased

Household growth from outside Auckland	Prosperity	Relationship	Health
NZ occupiers; moving to Auckland	Opportunity		
Immigrants settling in Auckland	Opportunity		
Returning Expats; settling in Auckland	Opportunity		

Household growth from within Auckland	Prosperity	Relationship	Health
Leaving home to set up 1st home	Can afford	With friends	
Setting up Flat	Can afford	With friends	
Couples setting up 1st home	Flatmates go	1st Home	
Relationship breakdowns: one moves out		1 house to 2	

Prosperity* = How attractive is Auckland to live in, relative to existing and / or other location choices

Maj reduction	Med reduction	Small reduction	Small Increase	Med Increase	Large Increase
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Figure 1: factors driving the increase or decline of occupied households in Auckland

There are therefore a series of factors which cause occupied household increases, and a series of factors which cause declines. In the chart above, the bolder the colour, SD4 consider the greater their impact.

Some of the factors are centred around perceived prosperity or conversely hardship issues. Other factors are based on relationship forming, break-ups or associated with health. The long term Auckland trends have shown that the factors that drive occupied household growth have tended to be stronger than the declining factors. This has led to a demand for extra households in Auckland of between 8-12,000 pa. The Auckland Plan predicts a requirement of a further 400,000 dwellings, over the next 30 years.

Prosperity and affordability normally have a cyclical and a short term effect on occupied household growth. Unless Auckland addresses it's housing affordability issues, it runs the danger of structural changes taking place in its household formation, with affordability increasingly driving people per household, rather than individual choice.

2.4 Factors which lead to purchaser demand for Auckland housing

As highlighted in sections 2.1, 2.2 and 2.3 above, Auckland has the following general housing trends / characteristics:

- Growing population of 1 – 2.5% pa, from a current base of just over 1,500,000, meaning annual population growth of 15,000 – 40,000 pa.
- Auckland’s population growth has generally been above previous “high” level forecasts. There are few reasons to suggest this will not continue.
- A perceived long term requirement of 8-14,000 extra households pa.
- Historic housing supply increases of 4-12,000 dwelling pa, although low in last 5 years leading to a housing supply shortfall.

Figure 2 considers the buying dynamics. All of the factors that are likely to create a rising market are in red, the bolder the colour, their increased perceived effect. Conversely cooling market features are in blue.

The investor market dynamics are considered next, followed by some issues when the housing market faces distress. As can be seen, when there is an economic downturn, there is usually a strong negative cyclical impact on the housing market.

Buying Dynamics	Heating Mkt	Balanced	Cooling Mkt
Interest Rates	Low	Moderate	High
Unemployment Concern	Low	Moderate	High
Ability to finance house buy	Easy	Possible	Hard
Is Now a good time to Buy?	Rising	Stable	Falling
Scarcity Perceptions	I'll Miss Out	Balanced	Over-supply

Investor Dynamics			
Regulations: Tax Status	Tax +ve	Tax Nuetral	Heavy Tax
Capital Gains on Rentals	No CG Tax	Future CG	CG Imposed
Perceived Rental Mkt Size	Growing	Stable	Shrinking
Supply Constraints	Low supply	Reasonable	Over-supply

Holding onto House Dynamics (How much of Market is affected?)			
Lost Job, mortgage to pay	Can pay loan	struggle=sell	Mortgagee
Perceived job security	Good = keep	Stable	Worry=sell
Scale of Mortgagee sales	Minimal	Low	High=Many

Figure 2: factors driving the increase or decline of occupied households in Auckland

It can be easy to see from the above chart, that when there is a heating market, there is increased demand to purchase housing.

When there is an excess demand (for all housing) v total market supply, it creates pricing increases; therefore supply of housing is a critical balancing factor.

2.5 The principals of supply and demand effecting price for Auckland housing

As highlighted in sections 2.1 and 2.2 above, the supply and demand issues in the Auckland housing market are finely balanced. The difference of Auckland to most other Australasian cities, is it's high relatively constant rate of population growth, and thus household formation growth.

As there are approx. 1 - 3% extra households supplied on an annual basis, most people have focused on the affordability issues of these particular houses. SD4 are of the view that greater attention needs to be had of ***the affordability issues that housing supply has on the other 97 - 99% of existing housing stock***. This will be discussed in greater detail later in this report, with examples provided.

Comparison could be drawn on the automobile industry in NZ. Since the industry was de-regulated in the late 1980's, there has been a substantial increase of affordable (predominantly) Japanese imported cars. The increase in cost effective supply of used and new cars has led a major move to affordability of all cars in NZ.

So how does the car industry relate to the housing industry? Policy makers that have an ability to influence new housing supply, need to very carefully consider the impact that the location and typologies of the new housing supply, has on the affordability of existing houses. New housing needs to be across a range of price points and locations, to enable a wide cross section of buyers to purchase, which will allow people with greater affordability concerns to back-fill the houses vacated by those buying newer houses.

Section 3 of this report looks at the development economics for greenfield housing, infill development and intensification development. Due to the GFC and the demise of most developers during the last 5-6 years, an insufficient supply of up-zoned brownfield land and extremely onerous bank finance conditions, there has been very little brownfield intensification development during the last 5 years. For greenfield and infill, the high land prices have driven the development economics to the point where new houses under \$600,000 just can't be built. This will be highlighted with examples in Section 3.

The impact of new supply only being able to be provided at a price point of \$600,000 + has had a dramatic effect on existing house prices. Those already in the market may well rejoice, but the lack of affordability is having a dramatic effect on Auckland. If these affordability issues continue, there will increasingly come a time, when those on lower incomes will not be able to afford to live in Auckland.

Something has to change! There has to be a more consistent supply of housing, across all price points, to match the annual increases in household formation. The increased supply of new housing in all price points, will create a "move - up buyer" to the new product, which then creates sufficient lower priced existing housing stock. As long as supply keeps pace with demand, and for a balanced market, it should keep pace and not be ahead or behind. There will be sufficient property that move-up buyers have vacated, to be appealing to 1st home buyers or buyers with affordability constraints.

So finishing on the car industry parallels. There has been substantial supply of new and used cars during the last 20 years, where affordability has improved for the entire car industry. Higher income people have generally bought the new cars, which has allowed an increased supply of good quality used cars, that lower income people have been able to afford. Lower income people have not benefitted in having new cars, but their current cars are much better and affordable than 20 years ago. Auckland housing could be the same.

2.6 Housing supply has a critical balancing act on house pricing.

What causes house price movement in an area is an extremely complex issue, caused by a number of related factors. Whilst it is extremely complex to try and identify the effect caused by each issue, we will below try and identify the main issues, and the directional affect they have on prices.

Internationally, within NZ and in Auckland, housing markets are often very cyclical. The main long term driver is the household occupier demand for premises, i.e. how many households are demanded and what is their long term rate of growth. These are discussed in detail in section 2.3.

There are then further factors which predominantly have a cyclical effect on the housing market, related to buying dynamics, investor dynamics etc. These are discussed in detail in section 2.4.

It has often been said that certain parts of the media have an exacerbating affect on the cyclical upswings or drops. Newspaper headlines such as “house prices are rising at \$500 per day”, create a scarcity perception amongst less informed buyers. (The sources of the newspapers are often statistically poor, especially when month to month sales comparisons are used, which can be very erratic). The “herd” mentality then follows, which then often exacerbates a trend, which maybe wasn’t even there in the first place. Conversely media over-emphasis on mortgagee sales in a recession, further spooks nervous buyers or existing owners.

It is in the interest of most housing market stakeholders to attempt to provide a “steady” market-place, whether this market place is growing or not. Upto 10% of the NZ economy is effected by the housing market. A steady market place where the ups and downs are reduced is beneficial.

Having housing supply that is able to have a stable turnover, but one where there is sufficient flexibility to provide some increases or slowing down, is the biggest contributor to providing a balanced and steady housing market.

Central and Local government policy makers should have a very strong focus on ensuring there is sufficient capacity in the brownfield and greenfield land supply market, to ensure the development market is able to provide sufficient housing, when the market requires this.

Figure 3 highlights all of the issues which affect a developers ability to provide supply to the housing market.

It is absolutely essential for the sustainability and well being of the housing market that sufficient local and central government officials have a deep understanding of the supply and demand dynamics of the housing market, and have and use the tools to moderate the market-place. Like a conductor of the orchestra, the industry needs to be in balance to thrive and be competitive.

The banking and finance industry also have a major effect on over-heating housing markets, and being the root cause of major collapses. Banks are often over-eager to offer finance to builders and developers in what they purport as a “partnership”. The reality is that when the storm clouds are on the horizon, the banking “partner” pulls away the umbrella, changes all the credit rules (because they can), and leave their customers high and dry. After pulling all their credit, they then needlessly bankrupt them. Hardly a recipe to entice a once bitten, twice shy developer to come back for more. The sad reality in NZ is that the experienced developers

often leave the industry in a recession, to be replaced by inexperienced naïve beginners, who will likely falter in the next storm. The Australian and American property financing banking system and property developers are far more mature and seem to be more resilient in market down-turns. Lessons NZ bankers could learn from!

Greenfield and Brownfield Land	Heating Mkt	Balanced	Cooling Mkt
Enough zoned land for 8-10 yrs supply	Not enough	Enough	Too much
Enough land ready to build for 3-5 yrs	Not enough	Enough	Too much
Competition between land owner/suppliers	Cartel like	Competitive	Undercutting
Govt Agencies understand supply dynamics	Don't underst	Knowledge	React late
Effect of land speculators in market place	Spec big \$	No speculat.	Quit market

Resources available to build	Heating Mkt	Balanced	Cooling Mkt
Developers able / willing to build	Dev's Kaput	Good Dev's	Too many
A healthy, sustainable building industry	No builders	Good Bldrs	Too many Build
Cost effective and skilled labour	Labour Lack	Skilled labour	over-supply
Cost effective and durable materials	Mat's too Hi	Good supply	Competitive

Financing issues	Heating Mkt	Balanced	Cooling Mkt
Interest Rates	Low	Moderate	High
Banks willing to lend on reasonable terms	Easy Finance	Moderate	Finance Hard
Availability of 2nd mortgage finance	2nd's Easy	Possible	No 2nd's Avail
Levels of equity required in project	Low equity	Possible	High Equity
Scarcity Perceptions	I'll Miss Out	Never panic	Over-supply

Council and Regulatory Authorities	Heating Mkt	Balanced	Cooling Mkt
Proactive and supportive Council body	can't cope	Responsive	under-used
Reasonable and fair Development Levies	Too low	Fair	Exorbitant
timely resource consents	too slow	Timely	under-used
timely building consents	too slow	Timely	under-used

Figure 3: Development issues affecting the potential supply to the housing market

The net effect of all of the above, is that the NZ developer market providing multi-unit residential from 2000-2008 has almost been totally obliterated. There are almost no experienced, able and willing developers to tackle residential multi-unit housing in Auckland in 2012-13. The few developers cropping up, almost all lack experience.

There is insufficient suitably zoned brownfield land to supply affordable multi-unit housing. The MBIE Report on "Residential Land Available in Auckland" dated 28 Feb 2013, clearly showed there was only enough greenfield land zoned for 1-2 years supply, and enough serviced for 6-12 months supply.

The supply side of the Auckland housing market needs fixing fast to balance the market.

3.0 Development Economics Applying to the Auckland Housing Market

As stated in section 2, new housing supply only creates an extra 1-3% of the total property market

So what are the development economics when developers produce either greenfield or brownfield housing?

It is easy for people to say, “why do the property developers not provide more new affordable housing?”

In Appendix 1, there is a chart on Development Feasibility Cost Apportionments, for

1. Greenfield housing.
2. Infill housing (take a full existing urban site, and “putting a house on the back”).
3. Intensification development, eg terrace housing or apartment buildings.

In this section of the report we will look at the development economics applying to each sector.

3.1 Development economics for greenfield housing development

This section will consider the development costs for a typical greenfield housing development, say as undertaken at Karaka Lakes.

For Greenfield housing the target range of costs and margins are as follows:

Serviced land cost (per section)	20-35% (of sale price)
Design fees for each property	4 - 8%
Council consenting costs	0.5 – 2% (dev levies incl in land costs)
Build costs*	35 – 50%
Marketing & Sales costs*	2.5 – 3.5%
Project management*	2 – 4%
Contingency allowances+	3 – 5%
Funding, fees and interest costs+	3 – 5%
Margin (reqd by bank to get funding)*	12 – 15%

Notes:

1. If developer builds a house and land package, on-sells on completion, all costs apply
- 2.* If land owner buys site, * costs are the Project House builder costs, + costs by owner

Therefore if the serviced land section price was to be in the upper part of the target range, say 30% (as Appendix 1), for a developer to produce \$400,000 new houses (which includes GST of 15%, therefore a developer net sale price of \$347,826), the land price would need to be no greater than \$100,000 per section. Appendix 1 shows that even if a section was \$100,000, for a \$400,000 sale price, the developer would barely break even.

The reality in 2003 – 2013, there are no \$100,000 green-field sections available, with sections in an outlying greenfield area such as Karaka in South Auckland, costing \$280 – 350,000 (inc GST). When one reviews the chart in Appendix 1, it is easy to see that if the land prices are so high, it is not possible for a developer to provide low cost housing. Later parts of this Report will review how land section prices could potentially be lowered and what the likely effect on house prices would be.

The actual Karaka Lakes example (eg 16 Lake Drive, Karaka) plays out something like:

Serviced 586m2 Section, ex GST	\$252,174	43.35%
Design-Build Costs (for 234m2 house) ex GST	\$314,565	54.07% @\$1344/m2
Driveways, landscaping etc	\$15,000	2.58%
Sale Price (\$669k inc GST, but exc GST)	\$581,739	assume no margin
GST Component in sale price	\$87,261	

The 586m2 serviced section costs are at 43.35% of the total sales price (when excl GST). This is just too high and in a healthy development market should be at 20-35%.

If a developer builds the housing, the margins would apply. The above example has such a high land component, that there is no margin possible and developers struggle to provide new housing when land costs are so high. If a lower cost house was to be contemplated (say instead of \$669k incl GST to below \$600k), the land cost component would be even worse at more than 50%. That is why it is so difficult to build low cost houses on new subdivisions.

It would be re-miss for a property professional not to highlight the crippling impact GST has on housing affordability. For the 16 Lake Drive, Karaka example, the GST collected by the Government on this \$669,000 property totals \$87,261.

3.2 Development economics for infill housing development

This section will consider the development costs for a typical infill housing development, say as undertaken in Pakuranga, where a full site has been subdivided into two halves, and the existing house is retained and the aim is to put a new town house on the back.

For Infill housing the target range of costs and margins are as follows:

Serviced land cost (per section)	20-35% (of sale price)
Design fees for each property	4 - 8%
Council consenting costs	0.5 - 2% (dev levies incl in land costs)
Build costs*	35 - 50%
Marketing & Sales costs*	2.5 - 3.5%
Project management*	2 - 4%
Contingency allowances+	3 - 5%
Funding, fees and interest costs+	2 - 4%
Margin (reqd by bank to get funding)*	12 - 15%

Notes:

1. If developer builds a house and land package, on-sells on completion, all costs apply
- 2.* If land owner buys site, * costs are the Project House builder costs, + costs by owner

Lets consider an example. 110B Gossamer Drive, Pakuranga is a 400m2 section for sale on Trade Me at \$369,000 inc GST, equaling \$320,870 exc GST. All the subdivision work and servicing has been completed. A completed house and land package may look like:

Serviced 400m2 Section, ex GST	\$320,870	46.65%
Design-Build Costs (for 230m2 house) ex GST	\$322,000	46.81% @\$1400/m2
Driveways, landscaping etc	\$15,000	2.18%
Funding Fees + Holding costs during build	\$30,000	4.36%
Sale Price exc GST	\$687,870	assume no margin
GST Component in sale price	\$103,180	
Sale Price incl GST	\$791,050	

The above infill example shows that with rising land prices it has become very difficult to have an infill housing development even break even. Again the section price component (at 46.65% excl GST) is just too high. The sale price would need to be close to \$791,050 just to break even. This is substantially above the prevailing house and land package prices for this part of Pakuranga.

SD4 are of the view that most of the “easy picking” rear lot sub-division sites across Auckland have been utilized within the last 15 years. As green-field section prices in city edge areas have risen (eg Karaka), so have people’s price expectations in subdividing their rear yard off. In essence there are now not enough opportunities for people to subdivide off their rear yard, relative to the large number of people looking for housing.

3.3 Development economics for terrace house development

This section will consider the development costs for a terrace house development. This could consist of a duplex, a triplex, quad or a row of terraces.

For terrace housing the target range of costs and margins are as follows:

Serviced land cost (per terrace unit)	20-25% (less as less land per property)
Design fees for each property	5-7% (higher: designs more detailed, unique)
Council consenting costs	0.5 – 2% (dev levies incl in land costs)
Build costs	50-60% (higher: greater improvement costs)
Marketing & Sales costs	2.5 – 3.5%
Project management	2 – 4%
Contingency allowances	3 – 5%
Funding, fees and interest costs	4% (higher: takes longer to complete)
Margin (reqd by bank to get funding)	12-15% (banks see med. risk; need margin)

Note:

All the development costs are managed by a developer and normally funded through a bank. In the good times, banks will lend to 60-65% of a project’s value, or upto 75-80% of a project’s cost. The developer needs to provide the remaining funds from equity. Terrace housing is a medium risk development style. The aim will be to provide a freehold title under each property. This provides improved security and less risk as a development than apartment development, and is thus somewhat easier to fund.

Lets consider an example. Say an 8 unit terrace home development in Manurewa. If we were to develop this within the new mixed housing zone after the Unitary Plan becomes operative.

If the developer was to target a series of 3 and 4 bed terrace homes, with a size range of 110-130m² and averaging 120m². Each unit has one carpark in an at grade carpark provided alongside. The target sale price is \$3,600 – 3,700/ m², which equates to say \$400,000 for the 110 m² 3 bed units and \$460,000 for the 130m² 4 bed units. The average sale price is thus \$430,000 inc GST. When GST is deducted, the net sale price for the developer is only \$373,913.

To make the development stack up, the developer has to be able to buy serviced land, such that after all services are provided (often by the developer), all development and reserve contributions are paid for, the serviced land cost per section should be no more than 20-25% of the net GST excl sale price.

The developer has to have the serviced land at \$75-85,000 per unit. Or for the 8 terrace homes a total cost of \$650,000 for the site. Assuming a net site density (R Value) of 80, or density to 80 dwellings / net hectare for 2 level terrace homes, this equates to 125m² of land per apartment or a total site of 1,000m². The unit size are an average of 120m² over two levels, so a building footprint of 60m² each. The 8 terrace homes would provide a site coverage of approx. 48-50%. This would also allow 8 off street carparks and some landscaping / outdoor areas.

If Council development levies for each terrace home were say \$10,000 per unit = \$80,000. This would need to be deducted from the \$650,000. If we allow site servicing costs to the developer of a further \$5,000 per unit = \$40,000. Therefore a 1,000m² site would need to be able to be bought for \$500 - 550,000.

So for this type of development to stack up, the following costs would apply (on a per unit basis):

Serviced land cost (per terrace unit)	20-25%	\$75-85,000
Design fees for each property	6%	\$22,435
Council consenting costs	0.5 – 2%	\$3,739
Build costs	55%	\$205,652
Marketing & Sales costs	2.5 – 3.5%	\$11,217
Project management	2 – 4%	\$11,217
Contingency allowances	3 – 5%	\$14,956
Funding, fees and interest costs	4%	\$14,956
Margin (reqd by bank to get funding)	15-20%	whatever is left over

The build costs of \$205,652 per unit would include the site development costs, including the at grade carpark and landscaping of at least \$15-20k per unit. This leaves about \$190,000 for the 110m² terrace home or \$1,700 – 1,800 / m². With all the tightened building regulations, building timber 2 level duplex / terrace homes to a reasonable standard would normally cost \$1,700 - \$2,000 in Auckland.

When we add up all of the above costs, these total about \$360-365,000. This leaves a development margin of only \$10-15,000. Much less than what a normal bank would require.

There are some potential opportunities for highly skilled and competent builder-developers to manage the above cost structure in an integrated fashion (doing the design, building, sales and project management as one) which may reduce the overall costs.

The Auckland project house builders (GJ Gardner, Jennian, David Reid Homes, Stonewood Homes etc) have generally only focused on stand alone housing. In Australia, with a very competitive project house builder market, some of these project house builders have branched out to providing two level attached housing, as described above.

Fletcher Residential is a traditional “stand alone house builder”. At Stonefields, Fletcher Residential are building two level attached terrace housing product. Note that it is the main contractor construction companies that have traditionally built the multi-unit apartment buildings (eg Fletcher Construction is building the larger apartment block at Stonefields).

The main contractor construction companies have a different management style and working ethos than the project house builders. Considering Australian experience, it will be essential that Auckland nourishes project house builders focusing on medium density terrace housing, as we believe it is these companies who will be able to generate the efficiencies required to make medium density duplex and terrace housing viable. The project house builder

companies also normally have far better quality control process than small time developers. We note that the leaky building saga of the last 10-20 years has predominantly involved design by architect, build by contractor processes. In a very general overview, project house builders have been involved far less in leaky building issues, relative to their number of houses built.

The above type of housing development is not possible in Auckland at present, as almost all of the existing residential areas don't allow densities of 1 dwelling per 125 m² of site. The aim of the Unitary Plan would be to up-zone sufficient existing residential areas that would allow a terrace house development as described above to be built.

Should sufficient land be zoned suitable for terrace housing, it will be the medium density project house builders that will be able to generate the scale to have the opportunity to seriously attack construction costs. Within the house building / property industry, it is generally felt that at least 30-50 dwellings per year are required to make a start at using scale to reduce construction costs. For companies building over 150-200 houses a year, procurement strategies that closely look at all components of the house building process become increasingly viable.

If sufficient land was up-zoned to the mixed housing zone as anticipated, SD4 are of the view that integrated project house builder-developers could provide completed housing at the price points required to make development viable.

3.4 Development economics for low rise (2-4 level) apartment development

This section will consider the development costs of low rise apartment developments. For the lay person, terraced housing can be defined when there is only one unit on a given piece of land, attached to another alongside it, where as apartments are when there are separate dwelling units below and above each other.

For low rise apartment housing the target range of costs and margins are as follows:

Serviced land cost (per apmt unit)	20% (less as less land per property)
Design fees for each property	8% (higher: designs more detailed, unique)
Council consenting costs	0.5 – 2% (dev levies incl in land costs)
Build costs	50% (higher: greater improvement costs)
Marketing & Sales costs	2.5 – 3.5%
Project management	2 – 4%
Contingency allowances	3 – 5%
Funding, fees and interest costs	6% (higher: takes longer to complete)
Margin (reqd by bank to get funding)	15-20% (banks see higher risk; need margin)

Note:

All the development costs are managed by a developer and normally funded through a bank. In the good times, banks will lend to 60-65% of a project's value, or upto 75-80% of a project's cost. The developer needs to provide the remaining funds from equity. Development of multi-unit residential is a high stakes and high risk game.

Lets initially consider an example of a 2-3 level low rise apartment development, that could be developed within either the Mixed Housing (MH) or Terrace Housing and Apartment Building (THAB) zones. For this example we will consider a 40 unit low rise apartment development in Ellerslie. Assuming that this was to be on a mixed housing or THAB zone site, after the Unitary Plan was adopted.

If the developer was to target a series of 1 bed, 2 bed and 3 bed apartments, with a size range of 50-90m² and averaging 75m². Each unit has one basement carpark. The target sale price is \$6,000 / m², which equates to say \$300,000 for the 50 m² one bed units, \$450,000 for the 75m² two bed units, and \$540,000 for the 3 bed units. The average sale price is thus \$450,000 inc GST. When GST is deducted, the net sale price for the developer is only \$391,304.

To make the development stack up, the developer has to be able to buy serviced land, such that after all services are provided (often by the developer), all development and reserve contributions are paid for, the serviced land cost per section should be no more than 20% of the net GST excl sale price.

The developer has to have the serviced land at \$78,261 per unit. Or for the 40 apartments a total cost \$3.13M max for the 40 unit apartment site. Assuming a net site density (R Value) of 125, or density to 125 dwellings / net hectare for 3-4 storey apartments, this equates to 80m² of land per apartment or a total site of 3,200m².

If Council development levies for each apartment were say \$10,000 per unit = \$400,000. (The \$10k is lower than what has been typically charged by Auckland Council in recent times, but is used to indicate what levels of development levies are required to make development viable). The \$400,000 would need to be deducted from the \$3.13m. If we allow site servicing costs to the developer of a further \$5,000 per unit = \$200,000. Therefore a 3,200m² site would need to be able to be bought for \$2.53m, or approx. \$800/m².

So for this type of development to stack up, the following costs would apply (on a per unit basis):

Serviced land cost (per apmt unit)	20%	\$78,261
Design fees for each property	8%	\$31,304
Council consenting costs	0.5 – 2%	\$3,913
Build costs	50%	\$195,650
Marketing & Sales costs	2.5 – 3.5%	\$11,739
Project management	2 – 4%	\$11,739
Contingency allowances	3 – 5%	\$15,652
Funding, fees and interest costs	5%	\$19,565
Margin (reqd by bank to get funding)	15-20%	whatever is left over

The build costs of \$195,650 per unit would include a carpark and storage locker (\$30k total) and site development costs of at least \$10-15k per unit. This leaves about \$150,000 for the 75m² apartment or \$2,000 / m². With all the tightened building regulations, building concrete apartment buildings to a reasonable standard would normally cost \$2,200 - \$2,600 in Auckland. So pretty tight on the costs!!

3,200m² of land equates to 4-6 typical full house sites, which at \$2.53m would need to be able to be bought for \$500 - \$600,000 each. Buying a full site in many parts of Auckland (in areas that buyers are able and prepared to pay \$450,000 for a 2 bed apartment) for \$500-600,000 is just not a reality, so it is easy to see why widespread apartment development is less likely in the mixed housing zone, until property prices reach such a level, that people are prepared to pay enough \$/m² for an apartment in the location they desire.

From reviewing calculations of this type, people should quickly be able to see that for a substantial amount of affordable housing to be able to be supplied, there needs to be substantial Auckland Unitary Plan up-zoning such that these types of sites can be supplied.

The reality in Auckland at present, is that there are just not enough (or any) sites available which can be purchased suitable for densities of one residence per 80m², for \$700/m².

As we stated the serviced land has not been available in Auckland at 20% of sale price for apartments, and all of the costs above look tight. These types of apartment developments are really hard to stack up.

For this example we have also used a development levy of “only” \$10,000 per unit, and even then it shows how hard it is to make apartment developments stack up. Developers are well aware that infrastructure needs paying for, however local government and the entire industry needs to ensure that these development levies are fair and don’t strangle development potential.

3.5 Development economics for mid-high rise (10-40 level) apartment buildings

Lets now look at the development economics of a medium to high rise apartment development. Say 10-18 levels within a Principal Town Centre area, or 20-40 levels in the City Centre area.

The major difference between a low-mid rise 2-3 level apartment building and a 10-18 level apartment is pretty simple. You can use the same amount of land to build 3-6 times more dwellings! But even more important is that apartment dwellers have the following desires:

- Low maintenance and high security (do it for me and I want to be safe!)
- A reasonable outlook in compensation for having no garden to look onto.

Taking the above into account, it is the higher level apartments in buildings that attract a higher \$/m² than the lower apartments, and are easier to sell. In apartment towers the lower 3-4 levels of apartments often have minimal outlook and are much harder to sell, that’s why they are offered at lower prices, \$/m². Security is also a lot better in the high rise apartments than the 2-3 level buildings.

We start with the same overall economic equation as the low rise apartments.

If the developer was to target a series of studio, (30m²+), 1 bed (45m²+), and 2 bed (65m²+), with a size range of 30-80m² and averaging 55m². Due to the much improved public transport that the politicians have promised will be provided, there is a customer requirement for only one carpark per two apartments (i.e. half the apartments have one carpark, the others do not).

So for this example we will use a site of 1,500m², build an 18 level tower, with retail on the ground floor, carparking at Levels 2-3 and apartments at levels 4-18. Lets assume this apartment complex is within the Takapuna Metropolitan Centre area. For the apartment tower, we could provide 8 apartments per floor, which over the 15 levels of apartments (on levels 4-18) would be 120 apartments. At 55m² per apartment, plus the service core, the apartment tower would have a gross footprint of 480-500m², or 30-35% of the site.

By being able to go up, the tower footprint on the site (as a %) is able to come down. A ratio of 30-35% is considered a good number to be able to provide good light and outlook for almost all (if not all) of the apartments. As apartments get to 20 levels and above, ratios of 20-30% apartment tower footprint are considered suitable. For this example we are able to achieve a Net R value (dwellings / hect) of 800. This is 6.4 times the dwelling unit density, relative to the low rise apartment example.

When the apartments get smaller, the construction costs \$/m² go up, and some of the development levies are often charged on a per unit basis. Therefore to make the development viable, there will have to be an increased sale price \$/m², relative to somewhat larger apartments.

The target sale price will then be about \$7,000 / m², for the smaller apartments. This equates to say \$200-240,000 for the 30-35m² studio units, \$300-380,000 for the 44-55m² one bed units, and \$450-530,000 for the 65-75m² two bed units. The average sale price for the “average” unit of 55m² is thus \$385,000 inc GST. When GST is deducted, the net sale price for the developer is only \$334,783.

To make the development stack up, the developer has to be able to buy serviced land, such that after all services are provided (often by the developer), all development and reserve contributions are paid for, the serviced land cost per dwelling has to be less than 20% of the net GST excl sale price. Ideally for high rise apartment development to be viable, with the higher construction costs is to get the serviced land cost per dwelling down to 12-15%. It is at these 12-15% land cost %'s that development was viable in Auckland's City Centre, in the last 15 years.

If we assume the 15% mark, the developer has to have the serviced land at \$50,217 per unit. For this example and simplicity, we will assume that the relatively small retail component of the development “washes its face”. Therefore the cost of providing the relatively small amount of retail is covered by rental and sales value.

Therefore for the 120 apartments a total maximum cost of \$6.03m could be allowed for the 1,500m² site, after all services are provided and development levies are applied.

We can now see how sensitive intensification projects are to development levies. For viable mid-high rise apartment development, total serviced land component costs need to target \$50,000 per dwelling, including development levies.

If for this example, Council development levies for each apartment were say \$10,000 per unit = \$1,200,000. (The \$10k is lower than what has been typically charged by Auckland Council in recent times, but is used to indicate what levels of development levies are required to make development viable). The \$1,200,000 would need to be deducted from the \$6.03m. If we allow site servicing costs to the developer of a further \$5,000 per unit = \$600,000. Therefore a 1,500m² site would need to be able to be bought for \$4.23m, or approx. \$2,820/m².

The following costs would apply (on a per unit basis) for medium to high rise apartments:

Serviced land cost (per apmt unit)	15%	\$50,217
Design fees for each property	9%	\$30,130
Council consenting costs	0.5 – 2%	\$3,348
Build costs	50%	\$167,392
Marketing & Sales costs	2.5 – 3.5%	\$10,044
Project management	2 – 4%	\$10,044
Contingency allowances	3 – 5%	\$13,392
Funding, fees and interest costs	6% (takes longer to build)	\$20,088
Margin (reqd by bank to get funding)	15-20%	whatever is left over

For more intensified forms of apartment development, carparks can often be supplied as an extra cost, whereas in low rise apartment purchasers expect to be given these as part of the package. The build costs of \$167,392 per unit can therefore exclude the carpark costs. (The sale of each carpark is assumed to also cover its build / development costs).

The larger apartment complexes normally have some extra amenity such as gyms and swimming pools. There are often also communal areas provided such as reception, ground floor areas etc. We also need to include a storage locker etc. We will thus allow \$10,000 per unit for this.

An apartment developer sells apartments as net area, whereas the builder has to build the gross apartment area (after including all corridors, stairs, lifts, service areas etc). A net to gross ratio for apartments of 85-90% is considered realistic (we have deducted the net : gross for low rise apartments. There will be a little bit of extra floor area, however the net : gross on low rise are normally better). This means a net 55m² mid to high rise apartment will have 62m² of building built. After the apartment amenity costs are excluded, there is \$157,392 available to build a 62m² apartment or \$2,540 / m². With all the tightened building regulations, building high rise concrete apartment buildings to a reasonable standard would normally cost \$2,400 - \$2,800 in Auckland. So we are reasonably tight on the costs, but within the range required.

So adding up all of the above costs, creates a total cost of \$304,655 (excl GST), for an average sale price of \$334,783 (excl GST). This leaves a margin of \$30,128 or 10% on a cost basis and 9% on a value basis.

As stated above, the banks will require a margin of 15-20% to provide the funding for the project. A smart developer will thus have to work hard to provide a very creative design which enables him to sell for slightly higher (\$/m²), get the land at a good price and build for slightly less.

So where will this type of apartment development be viable during the next 3-7 years? (i.e. after the new provisions of the Unitary Plan take effect). The following sale prices would need to be achievable:

- Studio of 30-35m²; sale price of \$200-240,000 (incl GST)
- One bed units of 44-55m², sale price of \$300-380,000 (incl GST)
- Two bed units of 65-75m², sale price of \$450-530,000 (incl GST)

So where in Auckland would the market be prepared to pay the above prices to purchase the stated apartments?

Having been directly involved in apartment development in Auckland for many years, a good rule of thumb applies that: *"the nearby cost of a freestanding 3 bedroom house, on a small section, has to be greater than the sale price requirements of a 2 bedroom apartment, for the apartment development to have any chance of being viable, within that neighbourhood"*.

Therefore for apartment development to be viable, the price of a 3 bedroom house nearby needs to be at least \$450,000. In many areas of South Auckland, where Auckland Council is projecting large scale apartment development (within its capacity analysis data), the apartment development fundamentals are a long way off from stacking up.

Medium-high rise apartment development will be very viable in market attractive areas. The above examples show that the increased height allowance (relative to low rise) provides:

- Apartments with increased amenity and outlook, desired by occupiers
- Lower land costs per apartment unit, because of greater density per hectare.
- Much improved development economics, making the development viable
- Far better site utilization, enabling much better chance of developers realizing Auckland Council's intensification targets.

3.6 Conclusions on development economics

Property development is a challenging and high risk industry. On occasions when the developer gets it all right, requiring large doses of good fortune, there can be good profits.

On many occasions there can be drastic consequences of failure, which affects a large part of the supply industry, and the communities they serve.

Councillors, Council staff and management need to dispel the underlying tone or notion that “those fat-cat developers can pay, they make too much money anyway”.

Any extra cost imposed on a developer will quite quickly make its way into extra total cost, and a developer will have to charge more to its buyers, which puts up overall prices.

The most important thing that Local and Central Government can do is to provide a stable and balanced planning regime, that provides greater certainty and allows a developer to realistically reduce overall risk. When overall risks are reduced, eventually price margin expectations or requirements will diminish.

The above examples show that:

1. Greenfield housing needs land at 25 - 35% of (GST excl) sale prices. Section prices have to drop for more affordable green field housing.
2. Infill housing has become very difficult in Auckland, as most of the easy picking sections have already been subdivided and built on.
3. Duplex and terrace housing has substantial prospects for many parts of Auckland, as long as there is sufficient up-zoning by Auckland Council. SD4 are of the view that the proposed Mixed Housing zone will provide substantial duplex and terrace housing opportunity across Auckland, which will assist in increasing household dwelling supply, and thus assist affordability, for the new dwelling and more importantly all those around them.
4. Low rise apartment development has higher relative construction costs and is sensitive to high land prices. This type of development will be difficult to make viable in low sale price housing areas.
5. Mid-high rise apartment development provides far greater intensification opportunity (dwellings per hectare), than the low rise version. SD4 is of the view that Auckland Council needs to better promote the benefits of medium to high rise apartments to the community, and up-zone sufficiently for this throughout Auckland, especially in the more market attractive areas.

As can be seen above, apartment development economics are difficult in areas which don't support the higher prices required to make apartment developments economically viable. Duplex and terrace housing is likely to be the main typology used to provide greater density in lower house price areas, whereas apartment development will only be viable in areas where purchasers are prepared to pay the cost premium (on a \$/m² basis) that this type of development costs to provide.

Allowing for greater height within an apartment complex, brings down the land costs per dwelling, provides improved apartment occupier outlook and amenity and has a greater chance of delivering the brownfield intensification targets set by Auckland Council within the Auckland Plan.

4.0 The Planning – Regulatory Regime applying in Auckland from 1998-2013

The comments provided in this section, are a property centric overview of the planning regime that predominated in Auckland from 1998 to 2013, and the effect on the Auckland housing market. They are an overall summary, provided purposely in a layman's language, and intended to provide a context for follow on sections of the report, and not intended to be an exhaustive account of specific historic detail.

We will start with some examples of Auckland apartment buildings in the 20th century, as they provide an important context of what we have now.

4.1 Auckland Residential Intensification in the 19-20th Century.

Auckland City Centre had as its very foundation, a large array of residential properties, developed initially in the 19th century. During the late 19th and early 20th century, the first wave of “regeneration” was applied to the very early buildings, which then meant newer (and often more intensified) forms of properties were developed in its place. Most of the more central areas had its original housing forms replaced by more commercial uses, however there are good examples of apartment buildings developed in the early 20th century, that are still used as apartment buildings now. E.g. the apartment buildings near the High Court by Albert Park.

During the 1970's and 1980's a more permissive planning regime existed in Auckland, which allowed medium rise apartment development to occur in a few “market attractive” areas. Examples of this are the apartment buildings on the Remuera Rd ridge (6-15 levels) and the two 15 level apartment buildings on Jervois Rd, Herne Bay. These apartment buildings were highly sought after by occupiers, however public concern over their scale resulted in a reversing of the permissive planning rules, with a dramatic reduction in allowable height for adjoining similar pieces of land. The result is that the scarce supply of these good quality apartments in desirable locations, has created a price rise for these apartments, and thus a consequent reduction in affordability!

4.2 The Auckland Context which led to the Regional Growth Strategy.

Up until the 1980's, throughout Auckland there were a large amount of Local Borough Council's, all with their own bureaucracies and Mayor's, which eventually amalgamated in the late 1980's. This created 7 City and District Councils with an over-arching Auckland Regional Council. Effectively 8 Councils managing Auckland, where as there were previously in excess of 50.

One of the roles of the Auckland Regional Council (ARC) was to manage the overall Auckland Region's Planning regime, and then provide Guidelines to each of the 7 City and District Councils.

The late 1980's and early 1990's saw Auckland continue to spread out further and further. By the early 1990's each of Auckland's town centres were devoid of residential accommodation, and as a result there was minimal vibrancy and activity in many of Auckland (and NZ's) town centres.

During the 1980's and 1990's there were international trends to increasing residential intensification of town centre areas, especially major city centres. There are numerous examples of compact growth strategies that have been adopted by many international cities during the last 20-30 years. There are also many variants of it, including Smart Growth, New

Urbanism etc. SD4 have a detailed understanding of these international development trends, their application, and the international examples most relevant to Auckland.

Cities such as Portland and Vancouver have led the way with Compact City Growth strategies. It is these two cities that are probably most relevant to Auckland, for the following reasons:

- They both have populations of 1.5 to 2.5m people
- They have and are growing quickly, due to internal migration and immigration
- Up until the 1980's most of their growth was from "going out" greenfield, what some people may call urban sprawl.
- They have a temperate climate reasonably similar to Auckland (relatively to other North American areas).
- They have housing typologies and building materials similar to Auckland.
- They have adopted compact city growth strategies before Auckland did.

So with the above context, in the mid 1990's the Auckland Regional Council decided to embark on an Auckland Regional Growth Strategy, which was finally launched in 1998.

4.3 Release of the Auckland Regional Growth Strategy.

In 1998 the Auckland Regional Council (ARC) released its Auckland Regional Growth Strategy (RGS). The RGS had as its foundation a series of intensification strategies, which the ARC had intended for each of the City and District Councils to follow.

As part of the RGS, there was a Regional Transport Strategy. This was intended to highlight and investigate all of the major transport projects which would be enablers of the proposed intensification.

SD4 looked in great detail at the Portland Regional Growth Strategy and the Auckland RGS, and they were both very similar. The ARC equivalent in Portland is the Metro. We have had a series of meetings with Portland's Metro officials 10-12 years ago. SD4 very strongly suspect the ARC effectively used the Portland Metro RGS, and adapted it for Auckland. We don't have a problem with that, it is just stating a fact. If the Portland Metro is so similar to the Auckland RGS, it provides great relevance to study the Portland property market ramifications, and consider whether they are relevant for Auckland.

Vancouver also has a containment growth strategy, which is very relevant for Auckland. Greater Vancouver is very spread out, and Vancouver's (general) policy has been to encourage intensification in its existing urban town centres and surrounds, and retain green-field within its boundaries. Vancouver has upzoned significantly in many outlying suburban town centres, and has been very encouraging of sensibly applied height.

So the ARC released the RGS with a focus on intensification and as its centre-piece a growth boundary, or the Metropolitan Urban Limit (MUL). The MUL concept is identical to that applied in Portland. So the RGS applied restrictions to the supply of new greenfield land, so that there was now a finite supply of land within the MUL.

Section 3 of this Report looked at the supply and demand economics applying to all housing markets, but in particular Auckland.

So in a city where there is strongly increasing occupier household numbers, growing at a rate of 8-14,000 households required per annum, constraining supply will very likely have an impact on price.

There therefore needs to be a careful management of supply, and if the intention is to focus on brownfield intensification as the predominant form of supply, there needs to be a zoning regime applied within the existing urban areas that ensures sufficient overall brownfield land for intensification is made available.

Cities adapting intensification growth strategies are effectively encouraging the supply of new housing to be in intensification form, rather than greenfield. There needs to be a deep understanding of the property development market dynamics of intensification development. SD4 is not convinced that a sufficient level of understanding had been prevalent in the ARC at the time and now within sufficient parts of the current Auckland Council.

Many Council elected officials and officers hold onto the belief that developers should just build affordable medium density residential in all areas of Auckland (and Council have relied on this for their capacity analysis numbers), even though the property market fundamentals do not support apartment development in many of these areas as envisaged. Many of the apartment development projections by the ARC (and now the current Auckland Council), in low socio economic town centres, are just not economically viable.

4.4 If the RGS intention was for intensification, what up-zoning actually occurred?

Prior to the adoption of the RGS, Auckland's city centre had started a re-juvenation and residential intensification process in the early 1990's.

The 1980's Auckland office building supply boom led to a huge hangover in 1989-1991 of vacant office space. Office vacancies in that time were at 25-30% in Auckland's CBD. The newer buildings were (generally) more desirable to office occupiers than the earlier built form, so most of the office vacancy was eventually centred around the older C, D and E Grade office buildings.

The Auckland City residential intensification market was essentially started from the adaptive re-use of old city centre office buildings that were vacant, and these were converted to apartments. Michael Mahoney and Andrew Krukziener were early developers who converted Auckland CBD office buildings into apartments in 1991-1993. From there and throughout the 1990's there were a large number of predominantly older office buildings, converted into residential apartments. By the mid-late 1990's, all the "easy picking" vacant office buildings had been converted to residential, the office vacancy levels reduced to more traditional levels, and new build residential started in the Auckland CBD.

The Quay West apartment building developed by Mirvac in lower Albert St was the first and largest new build apartment development completed. This was followed soon after by the Metropolis. These were considered good examples of urban built form.

The Auckland City Council had a very low development levy and a no residential rates regime running at the time, in the mid 1990's (YES you read correctly: minimal development levies, and no rates payable for a number of years for intensification residential occupiers). Anyone with a smidgeon of economics understanding will understand what happened next: The favourable development levy and rates treatment for intensification residential created a strong supply of new apartment projects to the city area.

Even after the no residential rates regime finished in the late 1990's (effectively a subsidy), new residential apartment buildings continued at pace in the Auckland city centre, until a combination of exorbitant development levies, the GFC which knocked out most of the residential intensification developers, and a drop in overall residential prices in 2008-2011 caused the city centre to slow down its intensification, during 2008-2012. SD4 are of the view that the Auckland city centre intensification is fundamentally sound and will re-ignite again.

However the RGS was intended to be the catalyst to intensification throughout Auckland, but what actually happened?

Each of the City Councils were expected to provide for a number of intensification areas within its District Planning regimes. After the formation of the ARC and the RGS, most of the City Councils put in place areas where intensification was intended to be applied.

Many of the major town centres of the existing Boroughs, never had height restrictions in its town (or City) centres (i.e. the original zoning allowed relatively tall buildings in its town centres). Having effectively no or quite permissive height limits allowed some apartment development in areas which were considered relatively market attractive, e.g a series of apartment developments in Takapuna, the Nautilus in Orewa, etc.

There were many other town centres that had minimal or no restrictions in height, and yet the development economics of apartment development (see section 3.5) meant that apartment development has yet to take place in these areas (eg New Lynn, Henderson, Manurewa and Papakura). The main factor is that the surrounding property prices were not high enough for apartment development to be viable. (eg who would be available to buy a 2 bed apartment for \$400,000, when a purchaser can buy a stand alone 3 bedroom house nearby for less than \$350,000)

The ARC carried out a series of "Housing Capacity Reviews" of the existing urban areas and stated that Auckland had sufficient brownfield capacity to meet demand. SD4 consider that the fundamental economic flaw in these ARC capacity reviews was threefold:

1. For intensification to occur in an area / neighbourhood, there has to be demand for the apartments or terrace houses at a price point that makes the development economically viable (see section 3.3 to 3.5)
2. Not all owners of property that has a theoretical chance of being more intensively redeveloped will want to develop their properties. i.e they may be very happy in their house and don't want to move. SD4 terms this "Development Chance", and it is highly variable depending on the individual nuances of every property, in every street, in every neighbourhood.
3. When an owner chooses to redevelop their site, they often may choose to not develop to the maximum number of dwellings permitted on that site. i.e. a site owner may be able to develop 10 dwellings on a site, but the owner chooses to develop 4 better quality town houses, that match his own preferred style and risk profile. SD4 terms this "Capacity Utilisation"

Whilst in 1998 Auckland moved to an intensification strategy, there was nowhere near enough up-zoning of brownfield land applied throughout Auckland during 1998-2010.

The main difference in the greater Auckland area of the RGS implementation, was a more permissive regime of allowing residential intensification in existing town centres and light industrial areas. This move was more formalized by the Auckland City Council in the mid 2000's when a Business 4 Mixed Use zone was applied, providing more specific locations for residential intensification.

From the mid 1990's and after the RGS was released in 1998, the easy picking sites were intensified first and the initial wave of intensification development was relatively affordable (not withstanding the leaky homes saga, which is another issue all together, but has had a market perception impact on medium density residential).

From SD4's perspective, there was not sufficient increases in height made possible, so most of the residential intensification throughout Auckland is what could be termed "squat developments". A highly intensified low rise form, with insufficient occupant amenity applied. "Sausage flats" is another term that could be applied. The major difference in the style of development encouraged in Vancouver during the last 20 years, is a far greater encouragement and acceptance of height, with strong design controls, throughout all of Vancouver. This has resulted in a much better quality aesthetic generally being applied in Vancouver's urban development form during the past 20-30 years.

By 2005 - 2010 the amount of available "easy picking" brownfield land opportunities in Auckland was exhausted. This resulted in the remaining potential development sites becoming scarce, resulting in high land price increases. This inevitably resulted in the remaining sites becoming too expensive to economically develop. For brown-field development to again be viable in Auckland, a MAJOR wave of up-zoning is required.

4.5 The MUL has restricted land supply, with only minor changes to the MUL in 15 years.

So the RGS's intention was to encourage intensification. Section 4.4 showed that for the first 5-8 years, the implementation of the RGS's initial intentions in brownfield was looking promising. However by 2005 - 2010 the scarcity of suitably zoned brownfield land and greenfield land was starting to have a major impact on supply, and thus cost.

The ARC's response was in SD4's view, much too slow and controlling. The ARC should have taken market forces into account much more in brownfield land development capacity analysis reviews. In greenfield land, the ARC should have responded far quicker to the looming shortage of sections available to build, recognizing the time it takes to consent and deliver residential sections.

The net result is that by 2005-2007, Auckland was facing a looming crisis in availability of affordable brownfield and greenfield land. As it has turned out, the GFC and the resultant downturn of residential market sentiment, caused a breathing gap for the Local Govt authorities in 2008-2010, to address the supply imbalance.

In the meantime almost all the intensification developers were badly affected by the GFC, and only the very well capitalized land developers survived.

4.6 The Global Financial Crisis had a major impact on intensification developers

The GFC and other factors caused the collapse of the entire 2nd mortgage finance industry, which had been a key part of the overall financing equation for almost all residential intensification developers. That was coupled with primary banks Credit departments "re-weighting" their preference away from non-income producing assets (i.e. development land), such that the banks called in all their development land loans.

The net result was that pretty much all the residential intensification developers that had significant scale projects in progress anywhere in NZ during 2007-2008 have been wiped out. Some may well say good riddance to some of the more colourful characters within the industry, however when any industry that supplies a product that has widespread (all be it cyclical) demand is cleared out of all its operators, the ultimate loser is the economy that relies on the completed product to be provided.

So as we enter 2012-2013, Auckland has very few residential intensification developers with the experience to provide the sought after demand. Some may well say: “we’ll get a new bunch of developers”, but the international property development market reality is “think global, act local”. Due to a City’s complex local nuances, it is very difficult to export development experience, and throughout thriving international cities, residential intensification development is invariably carried out by local people. Let’s hope everyone involved in the development industry, but especially its financiers, look after the new crop of developers better, when the next cyclical storm clouds invariably arrive.

4.7 In 2013 there is a major shortage of ready to build green-field sections

Section 4.4 and 4.5 above, have highlighted that the inflexible imposition of the MUL has had a dramatic impact on the availability of greenfield sections, in Auckland in 2013.

The MBIE Report dated 28 February 2013, entitled “Residential Land Available in Auckland” highlights the crisis in no uncertain terms.

As we look forward to the next 3 decades of Auckland’s growth, it is imperative that we adopt a far more flexible greenfield (and brownfield) land supply system, so that the industry has the opportunity to balance supply with demand. Auckland Council’s RUB approach seems far more sensible, as long as the failings of the ARC RGS are learnt and a far greater focus is adopted to a sensible release of the RUB greenfield areas.

4.8 When development levies increase: their impact on development type and form

Section 9 of this Report looks at the cost of infrastructure provision and that “someone has to pay”.

It is very straight forward economics that when extra costs are applied (in the form of development levies) to a property developer, these costs will eventually be charged onto the end purchaser (rather than be absorbed).

Section 4.4 highlighted that when development levies were almost non existent within Auckland’s CBD and there was rates relief (in the mid-late 1990’s), development activity flourished. Conversely by the mid 2000’s development levies had risen substantially in many Auckland areas, that it was uneconomic to develop apartments in many areas.

The property industry is accepting that “someone has to pay”, however those imposing development levies should in future take far greater account of the likely impact on economics and affordability in the end product. Should Auckland Council in future have a strongly stated preference for development in a particular area, one need only look at what impact reducing levies and rates had on development activity in Auckland’s CBD in the 1990’s.

4.9 Land supply shortages have directly led to increasing property prices

The Conclusion of Section 4, is that the constraints on land supply imposed by the RGS and the MUL, has had a dramatic effect on property prices in Auckland. The RGS has attempted to muddle with the age old theory of *supply and demand affects price* **and failed**.

SD4 are of the view that the main failing of the ARC's application of the RGS is that it was not sufficiently flexible to provide sufficient extra supply to keep the market in equilibrium. The market quickly picked up on the ARC's rigidity, with some market players (i.e. speculators) taking specific and rational action to optimize their positions.

It is difficult to retrospectively "punish" market participants who have profiteered from the opportunities provided by the regulatory system. SD4 are of the view that the major future issue is that we all learn from the recent past, and put in place a structure where super-profits are not created for a few, at great expense (through housing affordability) to many. We will provide comment to this in later sections of this report.

5.0 Addressing the Supply and Demand Imbalance

5.1 Supply and demand needs to be balanced to stabilize resultant pricing

Any healthy industry is where there is relatively stable pricing, supply matches demand, and speculators are not able to make wind-fall profits.

All of the Auckland supply constraints discussed in section 4, have led to a major housing supply shortfall in Auckland at the present time, reasonably considered to be 20-30,000 houses in Auckland in 2013. On total housing of approx. 450,000 households, we have a shortfall of approx. 5%. Most people have difficulty in grasping the main issues, so let's explain this with an easy to comprehend example.

At the moment there are 105 people wanting houses, and there are only 100 available. People see prices going up, which then makes them even more desperate to buy. Then investors / speculators show up. The speculators and investors see a rising market, so they buy (preferably at the start of the rising market), further fuelling the price up. When speculators see the market as likely to fall, they try and sell early which then often exacerbates falls in market demand and pricing.

If there was a perfectly functioning healthy housing market, the "supply tap" would be turned on when demand reached 101 houses per 100 available, and be turned off again when there were 102 (in total) supplied.

Whilst new housing supply only affects 1-3% of the total housing market, it is the lack of supply of the 1-3% when required, that has such a dramatic effect on the affordability of the other 97-99% of existing houses. When there is insufficient supply of housing (or conversely if there was too much supply), it's the other 97-99% of existing houses that are taken on a roller-coaster of price fluctuations.

In a myopic stable housing market, we would have just enough builders, providing housing just at the time when required, for a growing household occupier sector. Just as in the new and used car markets, those with better access to cash and debt would purchase the newer and higher value properties. This leaves a sufficient supply of affordable existing properties, for first home buyers and those people with less cash and debt resources. In this myopic stable housing market, speculators do not see any opportunities to profiteer, and they do not enter the market. This provides stability for the real users of property, or long term investors.

SD4 are of the view that stability of new housing supply has a great impact on the house prices of the 97-99% of existing houses. It is the affordability of existing housing that greatest attention should be focused on. The steady supply of new housing, at all price points (i.e from new apartments starting at \$200-250,000 to new housing at \$350-450,000) will have a stabilizing effect on the existing house affordability.

To achieve this supply and demand stability, as a minimum we need staff and management within extensive growth Councils (eg Auckland, Christchurch, and Waikato / Bay of Plenty) who intimately understand the impact of supply and demand and its pricing impact. As discussed above, a stable housing market needs to strongly minimize the impact of speculators.

5.2 Quelling demand has been tried but doesn't work

Sections 2.2 and 2.3 highlighted the long term drivers which have caused Auckland's population to grow by 1-2.5% pa for the last 50-60 years.

When discussing the Auckland growth issues, some people say: *"we have enough people in Auckland now, why don't all the new people just go somewhere else"*.

The more births and less deaths long term trend make the above proposition very difficult. Are we going to ask someone who lives beyond the average age expectation (at the time the growth strategy is released), that when you reach that age you will have to give up your house and leave? The long term trend of less people per household is also a major factor in increasing total household demand.

Should Auckland put a "We're Full" sign up at the bottom of the Bombay Hills? Effectively trying to stop the long term internal migration and urbanization trend.

The Noosa Shire Council (on Queensland's Sunshine Coast) tried the "population cap" strategy in the late 1990's. Noosa was trying to restrict the total population to no more than 50,000 people, by restricting new housing land availability. Noosa was struggling with growth management, so let the new people go elsewhere! This was intended to let all the existing people, many older and retired, live peacefully where they are.

The strategy seriously back-fired. Noosa has a very nice lifestyle and has long term trends of northward internal migration, predominantly from Victoria. Reduce supply of housing, the long term demand growth trend keeps happening, and we quickly have a looming shortfall. This leads to price rises, which creates opportunities for speculators, further driving demand. All property values rose dramatically across Noosa. Noosa's Hastings St land prices rocketed to the highest in Australia at over \$10,000 per m², higher than Sydney prime CBD land.

Affordability in Noosa became a major problem, resulting in the younger generation not being able to afford to buy property in the area where they had grown up in. This is not sustainable for a community. Eventually the Noosa Shires Council amalgamated with others to form the Sunshine Coast Council, and the 50,000 resident maximum strategy melted away.

If Auckland tries to cap the total residential population, effectively putting the "House Full" sign up, all that will happen is there will be a large increase of households in areas immediately surrounding the City. E.g. the entire greenfield area around Pokeno will urbanise exponentially. All the new residents will then be in another Council area, not contributing rates to the Auckland area, but probably still work in Auckland and using all of Auckland's services, including transport infrastructure. The Southern Motorway will be even busier!

In areas where there are major long term demand drivers for residential housing and where there are long term population increases, it is difficult to quell demand.

Central Government can direct all or most of its jobs away from high growth or housing demand areas. NZ already has this with relatively little Central Govt departments in Auckland (except those directly servicing Auckland customers). So there is not much more Central Govt can do to "steer people away from Auckland".

The only realistic response from a Council that is faced with high population growth drivers, is to effectively manage the population growth, which leads to a demand for an increase in total housing stock. Council should have a very strong focus on supply and demand stability, to maintain stable pricing and assist affordability.

5.3 What type of housing supply? This needs to be market demand driven

Developers will (generally) only provide what customers are willing to buy.

In all parts of the world, “having a roof over one’s head” is mainly driven by Maslow’s Hierarchy of Needs:

- Safety and security in your residence and neighbourhood is a primary consideration
- Having a healthy home is also a primary issue, being comfortable, warm and dry
- Not being over-crowded is a relative affordability issue.

All of the above issues are at the primary end of society’s targets for people’s housing. Central and local governments need to do all it reasonably can to address the above issues.

Once primary needs have been satisfied, people move to seeking a more desirable property. Most people will have varying preferences. The following considerations apply

- Preferences for a residence’s location. There will be a trade-off between various locations and the quality and size of housing available in that area at relative cost points.
- Whether the property sought is attached or free-standing is often a consideration of trading off between a property’s quality, the amenity it provides and its price.
- The maintenance levels looking after the property. Many occupiers seek attached properties, due to its good value for \$ and low maintenance aspects.
- The widely varying occupier household make-up, owner-occupier and renters. Each category of occupier has different preferences and requirements.

When one considers future housing demand typologies, great care should be taken of the likely category growth characteristics. i.e which sectors are growing, by how much, and what types of houses are they likely to want in the future?

When we are considering Auckland growth strategies that look out for the next 30 years, it is very important to understand the socio-economic trends that are shaping our household formation.

Many of our younger population are far more urbanized than their parents, and especially their grand-parents. The impact of computers, computer games, social media and the increasing PC attitude of “wrapping our kids in cotton wool”, has meant that our younger generation does not (as much) aspire to owning a large section with a stand-alone house.

Our growing Asian population in Auckland is very used to and accepting of living in a medium density residential format.

Our Auckland Maori and Pacifica community have very different household occupier requirements than the Asian occupiers, and Auckland Council and the development community must ensure there are housing typologies and suitable house zoning which cater for this Group. The variances within Pacifica cultures and Maori must also be understood and catered for.

For the next 30 years, Auckland’s population will continue to “age”, with the median occupier age increasing, as well as the number of people aged over 65 growing exponentially. Elderly people are likely to have much lower maintenance housing requirements, which is often suited to a medium-higher density format.

Auckland Council and the developer community need to have a strong underlying understanding of the growth drivers of household formation, for both the owner-occupier

market, as well as the rental housing market. Figure 4 highlights all the main residential typologies that generally make up Auckland’s residential market. Figure 4 highlights the densities of the various typologies, the land m2 per unit, the density net and the density gross.

Residential Typology Density Analysis					
	Category	Description	Land/Unit	Density (Net)	Density (Gross)
1	Stand Alone Housing	Lifestyle Block	0.5-10 Hect	0.1-2	0.1-2
2		Acreage Lots	2,000-5,000	2-5	2-4
3		Large Sections	800-2,000	5-12	4-10
4		Large lot	500-800	12-20	10-15
5		Medium Lot	350-500	20-28	15-21
6		Compact Lot	250-350	28-40	21-28
7	Attached Walk-ups	Duplexes	200-300	33-50	24-33
8		Triplexes	150-250	40-65	28-43
9		Quads	125-225	45-80	30-50
10		Terraces	100-200	50-100	33-62
11		2 Level Apmts	70-100	100-150	62-85
12		3 Level Apmts	60-80	125-175	75-100
13	Apartments with Lifts, Core etc	Low Rise: 2-3 Lev	70-120	85-150	52-85
14		Low-Mid: 4-6 Lev	45-75	133-220	80-125
15		Mid Rise: 6-10 Lev	40-60	150-250	100-140
16		Mid-Hi: 10-20 Lev	25-50	200-400	115-210
17		High Rise: 20+ Lev	20-40	250-500	140-250
Notes					
Density: R Value= Units/Hectare					
Density (Net) = Site Density: Units/Hect per net site area					
Density (Gross) = Community Density: Units/Hect (incl Street reserves etc)					

Figure 4: Residential Typology Density Analysis

Related to Figure 4, Appendix 2 and 3, highlights 2 further charts.

1. Owner-Occupier categories (in a 2041 Auckland market)
2. Renter categories (in a 2041 Auckland market)

The Owner-occupier categories chart considers all of the categories of occupiers, the likely growth characteristics of that category, and what their household typology preferences are likely to be.

Similarly the Renter categories chart looks at the household market size, what each categories growth characteristics are likely to be, and what housing typologies will each sector likely demand.

There is a very interesting trend or correlation. The occupier categories that are likely to grow (by extrapolating existing market demographics into future years), are also the categories having less attraction to detached housing. i.e. there is growth in the sectors that are quite accepting and even desiring of attached dwellings.

It can be very disconcerting to hear some politicians say “who would want to live in that type of apartment, we should be focusing on more stand alone housing like the good ole days”. This type of naïve comment, is based on the perspective that everyone “craves” for the 1950’s

standalone house with a big back yard to kick a football. The changing societal trends, show that irrespective of affordability issues, many categories of occupiers don't want a stand alone house on a largish section.

Policy makers need to have a deep understanding of the household typologies that future generations, split into their varied occupier categories, are likely to favour.

As Auckland matures into a quality international city, where it's occupiers value the benefits of urbanization, intensified forms of housing will face an increasing demand. There will always be people who want a new green-field house in suburbia. Whilst over 75-80% of all new Auckland houses, were provided in green-field suburbia during the last 20 years, there is likely to be a trend for increased urbanization and a continued increasing demand for quality intensification housing formats.

When reviewing the Auckland Council desires for 70% Brownfield and 30% greenfield, Auckland Council will need to up-zone extensively to allow the 70% intensification to occur.

We therefore need a sensible combination of intensification (brownfield) and greenfield land. For brown-field development to work, developers can only provide housing where people are prepared to buy at economical prices.

For those sections of the community content to live in intensification housing, we (the Council in it's zoning, and the developers in providing the housing stock) need to give the prospective purchasers housing in locations that they want and are prepared to buy in, i.e. market demand led intensification.

6.0 The Auckland Housing Market Impact of Supply Constraints

6.1 So we have had a shortage of land, how have land owners behaved as a result?

Section 4 highlighted the Planning Regime of the Regional Growth Strategy (RGS), which resulted in insufficient development land being zoned, relative to demand.

The scarcity has led to the power being in the hands of those that control the land. Essentially almost all owners of suitably zoned land have seen their land prices escalate rapidly, as a scarce resource is demanded by more and more people.

Unfortunately some owners have seen this increasing “power” position, as an ability to ration supply even further to the point, where the ever increasing demand for their scarce land holdings has seen them either achieve, or attempt to achieve what can only be fairly termed as “super-profits”. This is where the returns are so high, relative to the initial capital provided and the risk taken, that this sort of opportunity must be reduced or eliminated for a future efficient functioning market place.

The next section will provide an example of this

6.2 Flat Bush example showing scarce zoned land having a major impact on price

The property at 39 Flatbush School Rd is a good example of this. The 29.45 Hect of land was bought in 1995 by Yi Huang Trading Company for \$890,000. This equates to a raw land cost of just over \$3/m² in 1995. The land has been occupied in a relatively low value farming operation since, with no (or minimal only) improvements applied. This parcel of land now has a CV of \$30m and annual rates of \$39,932. The \$30m equates to a land value of just over \$100 / m². The owner has put the land on the market for \$112m (\$380/m²), with an inference that they are negotiable in price, to say somewhere around \$300/m². This represents a hundred fold increase in value, for doing nothing more than effectively waiting for the housing subdivisions to reach you. Appendix 4 shows the NZ Herald article highlighting this particular case.

Yi Huang Trading also has land at 21 Flatbush School Rd, where a similar scale of super-profit will likely be achieved.

Yi Haung Trading has behaved in a perfectly rational and legal manner. They saw the opportunity of the pending Planning regime of restricting land supply, considered the international comparisons and Economics 101 basics, invested \$890,000 and will be rewarded handsomely. We need to ensure that these super-profits are not available going forward, as if it is perceived that further super-profits are achievable, there will be an even bigger sector of the community, who will turn their hand at land speculation, in an attempt to achieve the super-profits.

6.3 How much 2013 value uplift is there in land inside and outside the MUL?

Karaka / Hingaia provides a very clear example of the differences in value of land, either inside or outside the MUL

Hingaia Rd, leading to Strathallan College, has some land just inside the MUL and directly alongside some land just outside the MUL. There is further similar land on the Hingaia peninsula on Park Estate Rd, which is also just outside the MUL.

250 and 254 Hingaia Rd is just outside the MUL is and has a current CV at just over \$20/m² of land.

Hugh Green Properties bought the following properties in Park Estate Rd:

10 May 1988	No 144	\$240,000	34.62 Hect	\$0.83/m ²
27 Jun 1989	No 152	\$325,000	21.88 Hect	\$1.49/m ²
20 Sep 1995	No 180	\$561,375	12.95 Hect	\$4.33/m ²
22 Nov 2005	No 158	\$835,000	8.08 Hect	\$10.34/m ²

Hugh Green Properties and / or related parties still own all of the above properties, which form a large contiguous piece of land just outside the MUL. The current CV's for all of the above Hugh Green Properties is about \$5-11 / m².

154, 168 and 196 Hingaia Rd land are just inside the MUL. These properties have been bought in recent years by related parties, Parklands Properties, Karaka Lakes Estate and Frank-Juliet Reynolds. They are the owner / developers of the Karaka Lakes Estate, which is immediately alongside at 128 Hingaia Rd. (128-196 is just 4 parcels of adjoining land, even though the street numbers have a gap)

196 is 8.24 Hect and was bought by Parklands in Nov 2005 for \$63.12 / m²

154 and 168 is 10.05 Hect and was bought by Parklands in Nov 2011 for \$207 / m²

In summary the land outside the MUL has a (CV) value of \$5-20/m² (even with the expectation that the land will be re-zoned at some stage soon), and identical land alongside, but inside the MUL, has been sold at just above \$200/m².

In conclusion the Land value uplift of being zoned (inside the MUL) and not zoned (just outside the MUL) is about 10 fold!

Considering that the Hugh Green land at 144 Park Estate Rd, bought for \$0.83/m² in 1988, could (if the same regime applied) conceivably be sold for upto \$200 /m². This provides a 200 fold increase in value in a 25-30 year time period.

6.4 What type of development has occurred because of high section prices?

As can be seen from the development economics section 3.1 to 3.6, the land component for residential development needs to be in the 20-35% of total sales price range, in a healthy property market, where supply matches demand.

For \$300-500,000 new house prices to be viable in green-field areas of Auckland, when we exclude GST, we have a sales price of \$261-435,000. Even if we allow for land prices at the upper end of this range (at say 30%), then fully serviced sections have to be available for \$78-130,000 each (excl GST) or \$90-150,000 incl GST.

In Auckland the land / section prices are at about twice these levels. What the high section prices are doing, is effectively forcing builders to build bigger houses.

As an example, when a section price is \$300,000, it is not practical to build a 60m² 1-2 bed cottage for say \$100,000 and then try and sell the house and land for \$450,000. Purchasers paying \$450,000 for a house want more than a 60m² cottage. Within the residential building

industry, a rough “rule of thumb” is that the build price will be at least the same or upto 1.5 times the section price. So when land is \$300,000 per section, the build should be at least \$300,000, forcing sale prices above \$600,000.

If we now imagine that serviced ready to build sections could be supplied for \$100,000 (excl GST). A builder wanting to build a 120m², 3 bedroom house could have the following development economics:

Serviced 300m ² Section, ex GST	\$100,000	28.75% of sales price
Design-Build Costs (for 120m ² house) ex GST	\$168,000	48.3% @\$1400/m ²
Driveways, landscaping etc	\$15,000	4.31%
Sales costs, contingency, funding etc	\$30,000	8.62%
Total Costs (exc GST)	\$313,000	90.0%
Sale Price (\$400k inc GST, but exc GST)	\$347,826	
GST Component in sale price	\$52,174	

This provides a builder / developers margin of \$34,826, after GST, or 10%. Not a great margin, (and one that is below what most banks would be willing to fund development at), but one that is realistic and would enable a sustainable building industry.

If we now look back at the land at 39 Flatbush School Rd (as discussed in section 6.2), the raw land costs, for residentially zoned, but not serviced land, are approx. \$300/m² for a land developer. This equates to \$3m per hectare (+GST if any). The latest smaller lot size subdivisions are providing approx. 70-75% net useable land area per hectare (the other 25-30% is in roads, footpaths, parks etc). A gross hectare of land yields approx. 18-20 sections (of approx. 350m² each).

If we assume the upper number of 20 sections per Hectare (gross), ie R20 Gross, and at a raw land cost of \$3m, therefore the bare land cost of each section is already \$150,000 (+ GST). To provide the site bulk earthworks, roading, footpaths, services etc (on site) adds another \$40-50,000 per section on average. Council now likes to add development levies of \$10-30,000 per section. The land developer often has to buy land in advance of subdividing it (eg Parklands Properties has purchased land in Hingaia Rd in 2011, for subdivision and development in 2013-2014), so the land developer has significant holding costs (bank interest or equity returns required). Lets assume the holding costs for 2-3 years, on \$150,000 of raw land per section adds another \$20,000. So we total all of the above costs up and we arrive at approx \$250,000 of costs per section (excl GST), before the land developer can think of selling. We then need to add sales and marketing costs and a land developers margin (otherwise why would they bother) and we quickly get to \$280-300,000 of cost per section (excl GST) or \$320-350,000 incl GST per section.

So to dramatically address housing affordability in new greenfield housing, we have to find ways to dramatically reduce the serviced land / section prices. The biggest impact is on the raw land prices of residentially zoned land. The price that a land subdivider has to pay for raw residentially zoned land. Following on parts of this Report will aim to address how this could realistically be done.

7.0 Providing Sufficient Brownfield and Greenfield Land

As highlighted in section 5.3, we need to have a detailed understanding as to the household make-up and demographics, and then supply properties to suit today's, but very importantly tomorrow's market. Typologies in locations that will cater for future demand.

No one can be sure what future people will want, but a very detailed scientific understanding of what has happened in the past, with a detailed understanding of social macro-economic trends affecting Auckland will be a very good starting point!

The property industry is of the view, that as much up-zoning of brown-field land as possible, is required. This will take considerable "political resilience" from elected Council officials, facing substantial NIMBY pressures, creating a NIMEY reaction from the politicians (Not In My Election Year). Unless Auckland Council up-zones a substantial amount of brown-field land, the reality is that all the pent up growth demand will have to go into green-field housing. If up-zone extensively and 50-60% (and maybe even 70% with extensive up-zoning) intensification growth is possible, the slack will be taken in green-field areas.

We will first look at brown-field land opportunities, followed by green-field.

7.1 How can we provide meaningful Brownfield land opportunities?

The detailed Fine Grained Analysis Report (FGA) produced by SD4 for Auckland Council in preparation for its Auckland Plan release, in Dec 2011, highlights that 250-400% of the theoretical capable supply of brown-field land is required; i.e. if a Council is trying to achieve 100,000 brown-field intensification dwellings in an area over a 30 year timeframe, the Council will have to up-zone sufficient land to create an opportunity for 250-400,000 total dwellings. This is explained briefly below:

Auckland is divided into approx 10,000 meshblocks. Meshblocks are created by the Department of Statistics to analyse and review households. The aim is to have 50-100 households per meshblock, however this varies as in low density situations there may be fewer dwellings, whereas areas that have been subjected to recent substantial intensification will have more dwellings.

When capacity analysis are carried out an initial reduction is made for site rounding down (zoning allows 3.63 units = 3). A further allowance is made by deducting the amount of existing dwelling units already on a property parcel. This is consistent with Council's theoretical capacity analysis and SD4's FGA analysis.

However SD4's FGA analysis considers two critical further items, analysed in a fine grained manner for every house, in every street, that makes up a meshblock. SD4's FGA considers:

1. **Capacity Utilisation:** the likelihood of owners developing to the maximum available density of that site. E.g. the new zoning rules allow 10 dwellings, however the builder-developer believes that 4 dwellings on that site would suit better.
2. **Development Chance.** The development chance considers the likelihood that a particular site within a meshblock will be redeveloped (to a changed density) within the next 30 years. Sites that have no or minimal improvements have high redevelopment potential. Sites that already have substantial improvements (for instance higher IV) are less likely to be redeveloped. The site parcel size is also a factor here. This is why Tamaki (with larger, low IV sites) scores much higher than Farm Cove or Manurewa.

The capacity utilisation will be a % per meshblock, of normally 50-80%. The development chance will be greatly impacted by the level of improvements (IV value) within the meshblock, and will be 15-80%. Capacity utilisation and development chance are then multiplied to obtain a total likely intensification dwellings increase per meshblock.

Areas of large underutilised sections (eg Tamaki), will have a higher score; say 80% (development chance) x 65% (capacity utilisation) equals a likelihood of approx. 50% of the theoretical capacity actually likely to be provided in the 30 year period.

In neighbourhoods where there are already substantial improvements on a site (i.e. higher IV) and relatively smaller section sizes, such as Manurewa, the development chance will be much less. Over a 30 year period, maybe only 25% of the sections that have been up-zoned will be developed on, with say 80% capacity utilisation. This equates to an uptake over the 30 year period of only 20% of the total theoretical development capacity.

SD4's FGA analysis have been peer reviewed by companies with development industry expertise (on behalf of Auckland Council), and been subject to substantial property industry review over the last 18 months. SD4's FGA methodologies have been agreed as technically and practically robust.

For the above reasons, Auckland Council needs to up-zone at least 250-400% of the theoretical capacity for every neighbourhood, to achieve the target intensification dwelling numbers.

Section 3 of this report looked in detail at the development economics of all the various housing typologies. This section showed that:

- Terrace and duplex housing would likely be the main form of economically viable housing typology in the lower socio economic areas. This housing typology is also considered more suitable and desirable for the Maori and Pacifica cultures than apartment style living.
- Attached / terrace housing will also be a good typology in medium-high priced suburbs.
- Low rise apartments are difficult to make viable, unless the land costs are sufficiently affordable and achievable sale prices are high enough.
- Mid to high rise apartments provide greater occupant outlook and amenity, use less land per dwelling and are easier to make economically viable in areas where housing cost within the surrounding neighbourhood are high enough. (eg a 3 bed house nearby has to sell for greater than \$450-500,000 to make an apartment development economically viable).

SD4's FGA (published in Dec 2011) concluded by:

- Substantial upzoning in almost the entire isthmus of Auckland is needed, in coastal areas and locales with good outlook.
- With major rezoning and sticking to town centres (as current draft Auckland Plan) could provide 90-120,000 extra dwellings
- Major rezoning in most areas (requiring huge political resilience) could provide 200-270,000 dwellings
- Without major re-zoning SD4 believes only 45-60,000 extra dwellings can be intensified

So 18 months on from SD4's FGA, and now that Auckland Council has released the Auckland Plan, followed by the draft Unitary Plan, **what is SD4's professional judgement on how much up-zoning has occurred and where, relative to what is required to achieve the 60-70% intensification targets** (i.e. 240-280,000 extra (after accounting for existing units taken away) intensification dwellings) set within the Auckland Plan?

The following SD4 comments apply:

On the positive (enabling intensification) side

- The Auckland Plan, followed by the Unitary Plan, takes greater account of market attractiveness, than the very early planning maps produced by Auckland Council in early 2011, and the almost no account of market attractiveness economics by the old ARC.
- The medium density housing typology has the opportunity to provide substantial household dwelling units and have a major impact on improving household affordability, in that neighbourhood. (Most occupiers have a preference to live in a certain neighbourhood, we all need to ensure we work towards being able to provide relatively affordable housing solutions, relative to that neighbourhood).
- The limited number of housing zones (effectively only 3 in urban areas; single, mixed and THAB) has made the application of the zoning to each neighbourhood, too coarse. SD4, and we believe the wider property development community, is supportive of an increase in zones to 4 (by allowing for an MH2 and an MH3), or even 5-6. The main issue is to ensure consistency of zoning types throughout all of Auckland. (i.e. don't allow a St Heliers special zone, a Browns Bay special zone etc). Overlays can be used for specific local nuances.

On the negative (restricting intensification) side

- There are a huge amount of missed opportunities of up-zoning potential, in the published draft Unitary Plan. There are many ridge lines which already have higher apartment developments, which are not sufficiently height up-zoned. There are many market attractive areas which could have a more permissive zoning applied, which have not. SD4 would like to see Auckland Council review all of the areas of "missed opportunity" in the draft Plan, and up-zone accordingly when the full Unitary Plan is notified.
- In Dec 2011, SD4 advocated a very intensive and well resourced public relations exercise was required to communicate good quality examples of medium density residential and the benefits of intensification to the community. Despite the valiant efforts of a number of well intentioned Council staff and elected officials, SD4 is of the view that Auckland Council has "lost the battle" with the NIMBY's, BANANA's (Build Absolutely Nothing Anywhere Near Anything) and NIMFYE's (Not In My Front Yard Either)".
- Affordability issues have not been sufficiently well explained (of ensuring sufficient brownfield capacity is supplied). Those people in our community who can not afford their own house currently, SD4 feel are being over-shadowed by the "noise" from those fortunate enough to have. Affordability needs to be tackled in dramatic fashion, otherwise Auckland will not be able to afford to house its working population.
- Auckland Council still has no real understanding of the actual practical brownfield residential capacity that the draft Unitary Plan will provide (despite the efforts of a number of the very capable staff within the Auckland Council RIMU unit). Auckland Council's "Capacity for Growth Study 2012", released in March-April 2013 is a theoretical desk-top computer exercise and takes no account of likely development chance and capacity utilization on a fine grained basis.
- The NIMEY effect appears to be taking hold, and many of the Auckland Council elected officials appear to be back-tracking on the extensive intensification zoning that would be required for the Auckland Plan intensification targets to be realistically met. Many elected officials are taking the stance that the draft Unitary Plan was the "stretch" out there plan, and from here we will just reduce the intensification a bit to more NIMBY palatable levels.
- There has been discussion on "staging" up-zoning. This does not work as all the current development viable sites, that should have say 20-40 dwelling units permitted, will be developed to a far less dense form if a more restrictive zoning is applied. Once developed, those dwelling opportunity numbers will be forever lost.

In summary, SD4 is of the view that:

- If the draft Unitary Plan stays very similar as to what has been released, over the 30 year period we may optimistically get close to 50:50 brownfield intensification v greenfield, but more realistically 40-45% intensification.
- If the draft Unitary Plan gets tinkered with to less permissive zoning, reducing height in many of the market attractive town centres etc, SD4 is of the view that we will struggle to achieve 25-35% intensification.
- To achieve anywhere near the target of 60-70% intensification:
 - Council needs to far better understand the basic economic fundamentals of property development, and up-zone in areas where development has a realistic chance of being able to be delivered.
 - ALL the missed opportunity areas need to be up-zoned substantially
 - Height needs to be reviewed, with increased height permitted in market attractive town centres and corridors (if necessary relaxing somewhat the exact prescriptions of height within each town centre type), allowing height based on a fine grained approach, including some out of centre locations still well serviced by public transport.
- Affordability to existing and new housing types will follow, only when sufficient supply opportunities are created, relative to demand.
- To achieve pricing stability, there has to be a match between supply and demand. From an economics perspective whether Auckland achieves 25, 40, 50, 60 or even 70% intensification, is not relevant. We just need to ensure that overall supply (either brownfield or greenfield) is sufficient to match demand.
- It's a very basic premise, that if brownfield land is not up-zoned sufficiently that enables intensification to the target numbers, then the "release valve" will need to be more greenfield land supply. For every brownfield development opportunity missed, a corresponding number of dwellings will need to be provided in greenfield.

7.2 Substantial green-field housing is required, how should this be done?

As discussed in the previous section 7.1, the most important criteria for housing market stability, is to ensure that supply is able to be closely balanced with the demand drivers.

Whether supply is greenfield or brownfield is not directly relevant, there has to be sufficient supply in combination. With Auckland Council having a stated focus on intensification, as many units will be in intensified form as to what the zoning will permit and the intensification development industry can economically provide. Obviously all the remaining demand needs to be met by greenfield supply.

As discussed in section 4, the ARC's Regional Growth Strategy took insufficient account of the supply and demand affecting price fundamentals. The MUL was too rigid and should have been adjusted more frequently.

So should we just do away with any form of city boundary and let farmers develop their land into urban areas wherever and however they like? From an economic perspective this excessive release of land strategy would also be flawed, as this could lead to an excessive supply of residential development land being made available. There are many examples of over-supply of land within NZ and internationally to see how destabilizing this can be for the entire housing market. An example to show:

If Auckland needs 10-12,000 extra houses per annum, and lets just assume that 50% in any one year would be of an intensification form. This leaves a requirement of 5-6,000 greenfield housing land parcels per annum. There are a number of studies carried out in Auckland, NZ and internationally that a “balanced” market should have:

- 2-4 years of supply of sections ready to be built on,
- 5-10 years of land zoned for residential housing, just awaiting services to be provided.
- A pipeline of future urban land, ready to supplement the land zoned for residential housing when it is required. The pipeline is one of the major “tools” in ensuring speculators do not price gouge. More on that later in this report.

If there were say 10-20 years of serviced sections available to build on, the competition between land owner-developers would become too intense, meaning there would be substantial price decreases, land developers would go broke, there would be new housing randomly located in incomplete subdivisions and Utility companies would not be able to adequately supply infrastructure to the new land.

A long term approach is required. The Rural Urban Boundary (RUB) concept is excellent. SD4 was part of the Auckland Plan Working Group sub-committee who considered this. The RUB concept allows a forward looking strategic approach to ensure a sufficient supply of greenfield land is provided, in an orderly fashion and in line with the above timing parameters.

The RUB concept reviews where residential and commercial land is required during the next 30 years. The RUB is (or at least should be!) sufficiently flexible to allow land to be released when required. SD4 is also very supportive of the strategic master-planning approach to green-field land release. This ensures that infrastructure issues are managed and all land owners in the area, have had the chance to be involved in the master-planning approach.

A final part of RUB strategy that was discussed extensively within the Auckland Plan Working Group, but has not been picked up, is sign posting where development is intended to occur within the next 30-100 years, where development will not go etc.

SD4 is strongly supportive of the 30-100 year sign-posting principals, as this will provide better certainty to landowners of future very long term intentions. It also allows environmental and agricultural groups to have significant input into which areas are potentially suitable for long term intensification, relative to areas which are considered “sacred”. The 30-100 year approach will also enable strategic reviews to be made of key infrastructure components.

7.3 Using the Housing Accord as a key enabler

On 10th May 2013, Auckland Council and the Government agreed the Auckland Housing Accord. This is intended to result in increased housing supply and improved housing affordability in Auckland in the interim period until the Auckland Unitary Plan becomes operative.

The Accord will provide the basis for collaboration between the Government and Council to urgently support the increase of housing supply and improved housing affordability in Auckland between 2013-14 to 2016-17.

The Accord provides New Flexible Powers, including (numbers as Accord document):

12. The Accord is conditional on Government passing legislation that provides new flexible powers to streamline consenting processes for transitioning land from rural use to urban use and residential development approvals.
13. Under the terms of the Accord the Auckland Council will be granted certain powers.
14. The legislation will enable Special Housing Areas (SHA's) to be identified by Council and jointly approved by Council and the Government.
15. SHA's are brownfield and greenfield areas inside the RUB, identified for the purpose of urban development, mainly for housing, but with provision for business and community services and amenities as well.
16. An SHA is not subject to the provisions of the operative Regional Policy Statement (RPS) including all references to the MUL, or any other operative District Plan.

SD4 is of the view that the Accord can be the key enabler to immediately “unlocking” rural land and converting this quickly to urban use. The first task will be to identify potential SHA sites and areas within the RUB. Before we can do this, we need to ascertain what the likely rural land-owner response will be, to being urbanized.

The next section will show that the home owner response, will largely be dictated by the type of land owner they are.

8.0 Greenfield Future Supply Issues

So if Auckland Council creates a series of “Special Housing Areas” (SHA’s) and effectively re-zones a bunch of greenfield land in the RUB areas, what is likely to happen:

- Will greenfield land just “magically” appear as housing sections 6-12 months later?
- What will be the likely response from the various types of land-owners?
- Are each of the RUB areas similar, or what differences are there in each area?
- How can we ensure that residential land will be made available as envisaged?
- What are the key issues that will influence the success of RUB re-zoning?

This section of the report will address all of the above issues

8.1 Future RUB areas need to take account of existing land owner types

One of the very first issues to consider within the RUB areas is what type of land-owners and properties are in the green-field RUB expansion areas.

What is the landowner behavior likely to be to being re-zoned? Will the land actually be made available for residential housing and how long might this take? Figure 5 on the next page highlights the various types of land owners with future development land.

The colours in figure 4 highlight the likely empathy with which owners will have to future urban development. These range from the dark blue, owners likely to be hostile to urbanization of their small rural block, where they receive “borrowed amenity” from their rural neighbour’s outlook. To those owners shown as a Red colour, who will likely welcome urbanization with open arms.

So how can we consider the main drivers that will influence likely behaviour . What are the key issues that will likely influence the behaviour of the various land owners to being urbanized? Sections 8.2 and 8.3 will consider this.

	Inside MUL or Structure Plan approved		Outside MUL; now potentially within RUB
1.0 Inside MUL Landowners		1.0 Inside RUB Landowners	
M1	Small Subdivided Site Owner. 1,000-5,000 m2. Has small site in country-side, providing tranquility from undeveloped neighbours. Development inevitability	R1	Small Subdivided Site Owner. 1,000-5,000 m2. Tranquility provided from undeveloped neighbours. Likely hostile to greenfield expansion
M2	Accepting Small Lifestyle Block Owner. 5-20,000 m2. Has purchased for lifestyle purposes, now faces redevelopment inevitability, will make small \$	R2	Resistant Small Lifestyle Block Owner. 5-20,000 m2. Has purchased for lifestyle purposes and is against greenfield expansion. More so if high IV/ CV
M3	Anticipating Larger Lifestyle Block Owner. 20-50,000 m2. Has purchased for lifestyle purposes, has had many years to adjust and anticipate urbanisation, large \$	R3	Mixed View Larger Lifestyle Block Owner. 20-50,000 m2. Has purchased for lifestyle purposes, mixed views on redevelopment, some in favour, some opposed
M4	Hobby Farmer: 30 - 100,000 m2. Medium-Long term owner; land re-zoned future urban since purchase. Awaiting best time to sell realising windfall \$	R4	Accepting Larger Lifestyle Block Owner. 20-50,000 m2. Has purchased for lifestyle purposes, but can see the inevitability of urbanisation; planning for future sale
M5	Farmer: 10 Hect +, Med-Long term owner; land re-zoned future urban since purchase. Highly aware of rezoning \$ windfall, will sell at optimum time	R5	Hobby Farmer: 30 - 100,000 m2. Medium-Long term owner; has purchased for countryside living. Can see pluses and minuses of greenfield development
M6	Farmer / Land Speculator. Bought land to farm but with a target of utilising land for re-sale with future urban use, aims to maximise on-sale	R6	Larger scale Farmer: 10 Hect +, Med-Long term owner; MUL may move, puts land inside RUB and future urban. Future ownership dependant on likely payout
M7	Passive Land Speculator; has purchased property in last 5-10 years, leases land to other farmer / user of the land. Passively awaiting re-zoning, maximise sale \$	R7	Farming Land Speculator. More recent purchase. Bought land to farm but target of owning land that has potential future urban use
M8	Active Land Speculator; has purchased property in recent years, is actively engaged with Council to zone land to Urban	R8	Passive Land Speculator; has purchased property in recent years, leases land to other farmer / user of the land. Passively waiting land to be in RUB
M9	Land Investor; Land now zoned urban, however for a variety of reasons the land owner chooses not to release the land to subdivide or build on	R9	Active Land Speculator; has purchased property in recent years anticipating MUL move, will become actively engaged with Council to zone land to Urban
2.0 Land Developers			
L1	Land Subdivider; has purchased land with the intention to sub-divide and create sections; Releases sections based on machinery availability, perceived market demand and likely price	L1	Land Subdivider; has purchased land with the intention to actively re-zone the land or create a Structure Plan, to allow future sub-division. Is effectively an active speculator, who sub-divides
3.0 Build out Developers		4.0 Brownfield Land-Owner / Developers	
G1	Masterplanned Community Developer. Buy greenfield land and create a Master-plan for a new community and progressively deliver completed housing to purchasers. In NZ: Hobsonville Point	B1	Masterplanned Community Developer. Buy brown-field land and create a Master-plan for a new community and progressively deliver completed housing to purchasers. In NZ: Stonefields, Kensington Park
G2	Build-out house builder. In US called a "Tract" house builder. Purchase land to build 10-200 houses over the next 6-48 months. Develop houses, then subdivide land. In NZ this is Fletcher Residential, Universal Homes	B2	Mixed Housing / Terrace House Developer. Has existing residential land and wants to intensify the residential use with terrace housing or low rise apartments
G3	Project house builder. Build on sections provided by Land Subdivider. Either house and land, or build on someone else's land. In NZ: eg GJ Gardner, David Reid	B3	Brownfield apartment developer; has property with existing industrial / business use, wants to replace with medium-high density Mixed Use and / or apartments
Likely Resistance or Support to re-zoning or urbanisation			
1	Likely Highly resistant to re-zoning of land	10	Strongest beneficiaries of urbanisation
2	Strong resistance to re-zoning anticipated	9	Strong supporters of up-zoning and urbanisation
3	Resistance to re-zoning anticipated	8	Supportive of up-zoning and urbanisation
4	Likely opposed to re-zoning or urbanisation	7	Likely to see the benefits of up-zoning, urbanisation
5	Mixed views on re-zoning or urbanisation	6	Not supportive of change, but likely accepting

Figure 5: Greenfield Land Owner Categorisation.

8.2 Key factors likely to influence land owner behavior in being urbanised

Having considered closely all of the key factors, SD4 is of the view that the following have the most pronounced affect on likely land owner behavior, and response to urbanisation.

1. The size of the land parcel of the rural property, land area m².
2. The Improvement Value (IV) of the property, relative to Capital Value (CV)
3. The relative CV \$/m² of the property.

After Figure 5 we will below describe the likely affect each has on development chance. SD4 have been closely modeling the effect of each factor with Auckland Council's Research, Investigations and Monitoring Unit (RIMU). At the end we provide a series of numbers which have been transferred into a mathematical formula by SD4 and RIMU, which has enabled a series of Maps to be provided for each land parcel within the RUB Areas.

Factor 1: The size of the land parcel of the rural property, land area m².

For property owners with only a small parcel of land, often living next to neighbours with larger land parcels, these small property owners receive an amenity value from living in a rural setting, yet close to the big city. As land holdings increase to 5-20,000 m² these owners are still primarily benefitting from a lifestyle block environment.

At the other end of the scale, owners holding parcels greater than 10 hectares are likely to benefit from urbanization, with land values likely to increase as a result. So in summary, larger land parcel owners will likely be more receptive to intensification, whereas small parcel owners will likely be resistant.

Factor 2: The Improvement Value (IV) of a property, relative to Capital Value (CV)

Similar to brownfield re-development, when a property owner has invested substantially in improvements in a property, the owner will likely be resistant to essentially loosing these improvements, to make way for a new subdivision. The greater the level of IV relative to CV, the greater the resistance to urbanization is likely to be.

Conversely if the improvements can be utilized within the new urbanized setting, the resistance may lessen. i.e. keep the existing house that currently sits on a 10 hectare block, subdivide the existing house onto a 5,000m² block and subdivide the remaining 9.5 hectares of land for further houses.

Factor 3: The relative CV \$/m² of the property.

The higher the value of a property, or relative CV, the greater the chance of the property being re-developed in the nearer term. This factor is not as important as the above Factors 1 and 2, so has a lower weighting effect.

Having modeled the above factors substantially with RIMU, we provided the following weightings to each of the above 3 factors, shown in Figure 6.

Factor 1		Factor 2		Factor 3	
Land Area, m2		IV / CV		CV \$ / m2	
1,000,000	2.0	0.00	4	\$200	2.0
500,000	1.9	0.025	3	\$100	1.6
250,000	1.8	0.05	2.5	\$85	1.5
150,000	1.7	0.10	2	\$70	1.4
100,000	1.6	0.15	1.5	\$60	1.3
75,000	1.4	0.20	1.2	\$50	1.2
50,000	1.2	0.25	1	\$40	1.1
30,000	1	0.30	0.8	\$30	1
20,000	0.8	0.35	0.6	\$20	0.9
15,000	0.6	0.40	0.3	\$10	0.8
10,000	0.4	0.50	0.15	\$6	0.7
5,000	0.3	0.60	0.1	\$3	0.6
3,000	0.2	0.70	0.05	\$0	0.5
1,000	0.1				

Figure 6: Weightings of key factors likely to influence land owner behavior.

RIMU then ran a mathematical formula to simulate a graph for each of the factors. Every property within the RUB area, has a Land area, an IV value and a CV value.

Appendix 5 shows the effect of Factor 1: the Land Areas of all the parcels of land within all of Auckland’s RUB areas, and all undeveloped areas within the MUL.

Appendix 6 shows the effect of Factor 2; IV / CV ratios of all the parcels of land within all of Auckland’s RUB areas, and all undeveloped areas within the MUL.

As discussed above, and can be seen in Figure 5, Factor 3 has less of an influence and is mainly related to a likely timing of intensification, so will not be mapped within an Appendix.

So to combine all of the factors, and arrive at the main point of interest, a further mathematical calculation then measured the score for every RUB property of Factor 1 x Factor 2 x Factor 3 for every parcel of land within all of the RUB areas. The formula and results were run through the Auckland Council GIS system. The resultant Maps are provided in Appendix 7.

The following section will consider what all of this information means and attempt to provide some thoughts as to the likely future behavior of the various property owners.

8.3 Comments on the Various Maps produced in Appendices 5-7

Section 8.2 considered 3 key factors that SD4 believe will have the greatest influence on what the likely RUB land owner behavior will be to future urbanization.

Appendix 5 shows all of the land areas of every parcel. It is immediately evident that many areas of the RUB have a number of small Parcel owners. The area surrounding the Drury interchange is considered a very near term RUB intensification area, yet a number of the property owners have small parcels, which will make meaningful aggregation of parcels by a land developer difficult, costly and time consuming. One can also see that the Dairy Flat area has a number of smaller land parcels, where as the area to the West of the Motorway, west of Orewa has larger land parcels.

Appendix 6 shows all of the IV / CV Ratios. What becomes immediately apparent is the number of lifestyle block subdivisions of small land parcels, which have big houses on them. These house owners are likely to be strongly resistant to urbanization. Whilst it is unlikely that they will prevent urbanization in areas surrounding them, it is less likely that their land will become available for subdivision in the near future.

Appendix 7 is where all of the information is combined. These Maps should be studied in great detail by all Council and Government officials involved with trying to unlock greenfield development land. The land parcels with the orange-red colouring is where the property owners are likely to greet RUB officials with tea and scones. The blue shaded land parcels is where protective armour is recommended for the bricks that will likely fly your way.

So before we look at each area in some detail to review what is likely to transpire, lets take a look back at Auckland's urbanization since the early-mid 19th century.

8.4 Auckland historic urbanization trends to consider how RUB areas may be developed

Lets consider some key areas of Auckland's historic urban development to provide context on what is likely to happen in the RUB areas (this is not intended as a history recital on Auckland's urban growth, just picking out some key aspects which will likely influence future RUB area urbanization).

Early Auckland settlement centred around Point Britomart, the waterfront, and then up the Queen St valley. Gradually settlements appeared in the "out-posts" of Parnell and on the Ponsonby / St Mary's Bay ridges. In the late 19th century and turn of the 20th century, settlements appeared in areas such as Howick. Other current Auckland isthmus areas had farmland, with large homesteads, areas such as Remuera. Gradually the farmland areas were subdivided to smaller parcels, with the farm homestead often surviving on 1-2 acres. Depending on when subdivision took place, a number of the 1920's to 1930's subdivided land have been since subdivided down further. Many of the old homesteads still survive, some on reasonably large land parcels, whilst others have had infill intensification surround them, with the homestead land parcel reduced in size even further.

One can look at the re-development of agricultural areas of West Auckland or Mt Wellington and Otahuhu. Urbanisation took place in all the areas surrounding the vineyards and glass-houses. As all of the land around these areas became highly urbanised, eventually the vineyards and glass-houses also ceased trading and moved on. Essentially the Vineyards and glass houses would have had high improvements (IV) to capital values (CV) when these areas started being developed 40-60 years ago. Over time, the surrounding land has been

intensified, to the point where the vineyards and glass houses are now the lowest IV of the neighbourhood. This is when they have now also sold up and moved on. That's what this country's pioneers would have called progress!

In more recent times, one can consider the land development patterns of areas in East Auckland, say in Botany Downs in the North to Takanini in the South. The main difference of this East and South-East Auckland land urbanization pattern compared to most of the RUB areas, is that (in general) these areas have generally been farmland, and not subjected to lifestyle block subdivision, before being urbanised. Each of these small farms have been sold off in parcels to land subdivision companies, who have carried out the infrastructure provision and land subdivision works.

8.5 How does Auckland historic urbanization trends assist likely RUB sequencing?

So what do the historic Auckland urbanization trends all mean for the development of the RUB areas? How will the RUB area land likely eventually come onto the market?

SD4 are of the view that Council and key RUB consultants work with property owners to strategically master-plan all the areas from a very high level: assume all land will eventually come on stream to be urbanised: it will all just take time.

RUB officials need to develop a deep understanding of the development fundamentals of land developers who may develop RUB land, and the likely behavior of RUB land owners. Understanding the details of the Maps in Appendices 5-7 would be a good start.

Once RUB officials have understood the development fundamentals, they will quickly learn that "trying to swim against the tide" can be difficult. A bunch of small lifestyle block landowners, with high value houses on their small land parcels, will not likely cooperate quickly to become part of a major land subdivision group, in the near term. (i.e. the dark blue colours on the Maps in Appendix 7).

RUB officials should carry out a detailed fine grained analysis of each of the RUB areas that is contemplated to be re-zoned. The fine grained analysis will highlight the easier areas to commence redevelopment. It will likely lead to RUB officials being encouraged to start the initial greenfield RUB expansion in areas which are likely to be more development friendly (i.e. the yellow-orange-red colour areas as shown in Appendix 7).

The likelihood is that once urbanization in an area commences, many of the land owners will also accept the urbanization change, and adapt their properties accordingly.

A number of the land owners will want to retain their existing lifestyle block uses, i.e. the aqua and blue colour parcel owners as shown in Appendix 7. That will be fine, as long as subdivision is allowed to continue in land parcels alongside, and the entire area is master-planned. Those properties with the highest IV values and smallest land parcels will probably be the last to redevelop, or some may stay as they are for the next 50 years, just like West Auckland's vineyards! This will add to the character of the area.

The next section will consider that someone has to pay for the infrastructure, who should this be? From here we look at tools that encourage existing land owners to move more quickly, once re-zoning has occurred in an area.

8.6 How and where can RUB Areas be enabled quickly using the SHA Process?

As part of the Housing accord, it is Auckland Council's task to identify SHA areas (cl 14) or accept proposals for consideration of an SHA (cl 18). SHA's should be predominantly residential and target 50+ dwellings when in a new greenfield setting, and 5+ dwellings in a brown-field setting.

The area of Tamaki has been identified as an ideal SHA in a brownfield setting, which SD4 is strongly in agreement, as worthy of fast-tracking through the Housing Accord process. Many of the existing town centre areas (such as New Lynn) are already sufficiently permissive so will not need fast tracking. SD4 suggests that Auckland Council sets up a "receiving process" for brown-field land owners to approach Council.

Now considering Green-field potential SHA areas, SD4 recommend that we start by looking at the Maps in Appendix 7, which shows the Overall Development Potential of each Parcel in the RUB areas. We need to focus on sites with a yellow-orange-red colour, as those most likely to have receptive land owners. For the SHA process to work, we need to have cooperative and willing land owners.

Section 7.2 highlighted that Auckland is in "catch-up" mode, and substantial green-field land is required to be zoned to urban residential to assist affordability. So where can extra land be provided relatively quickly, and where are we likely to have receptive land-owners?

Quickly releasing all the remaining green field areas within the MUL, mainly in **Flat-Bush, Ormiston, Takanini and Orewa** would be a good start. These land owners should be sternly advised to move quickly, before substantial extra RUB land supply hits the market, which will likely suppress their land values.

As for land outside the MUL, inside the RUB, the **Hingaia Peninsula** is the most obvious location to start. Much of the peninsula has already been urbanized, the area has recently improved transport connections, and the peninsula is market attractive for purchasers. Hingaia has approximately 300 hectares (gross land area) of rural land, which could provide 3-4,000 extra households. A good location to start.

Drury and out to Pukekohe will be more difficult to accelerate quickly, mainly due to the fragmented, mostly lifestyle block ownership. Local knowledge of the property owners will be required, as well as the details of the Maps in Appendix 7, to find the most suitable SHA opportunities.

Westgate, Hobsonville and Whenuapai also provides good potential, especially the area being master-planned by IMF Westland and also the area upto Brigham Creek Rd. Good transport access and land ownership in larger Titles.

Silverdale West also provides SHA potential, mainly as much of the land is held in large Titles. Consultation with land owners and master-planning of this area will provide a better indication of the prospects of the immediate opportunities of this area.

Of the above areas, the areas inside the MUL need to get a head-start, followed quickly by Hingaia. The other areas may take slightly longer, but need Council Case Managers appointed, to assist in their acceleration.

9.0 Someone has to pay for the infrastructure, who should this be?

Infrastructure comes in various guises. There is:

1. Existing infrastructure that is passed its use by date and needs replacing, irrespective of whether any new development took place in the neighbourhood.
2. New infrastructure within an existing urban community, providing improved amenity to existing occupiers. e.g, stormwater and sewer separation in many parts of Auckland.
3. New existing urban area infrastructure that is clearly required because of increased demand from extra residents. e.g. a new water supply main as the current main has insufficient capacity.
4. New greenfield infrastructure catering for new greenfield developments. e.g. new local roading, sewer pumping stations in new greenfield growth areas.
5. New Regional Infrastructure. This is mainly strategic transport infrastructure, which needs to (continue to) be funded from Central Govt sources.

The property development community fully understand that “someone needs to pay for infrastructure”. The best long term answer is that this should be considered in a fair and equitable way. Making the developer pay because they are “rich fat cats”, doesn’t wash. Section 3 highlighted the difficult situation with development economics and that eventually the house purchaser will pay anyway.

So lets look at each of the above scenarios.

9.1 Existing infrastructure that is passed its used by date

Existing infrastructure that is passed its use by date and can’t meet the demands of the existing households needs to be paid for by existing householders. Very straight forward!

In the past Council controlled entities, such as Metrowater have attempted rather unsavory tactics to try and get developers to pay for infrastructure that they should have replaced in the first place. I’ll give an example and if this type of behavior is allowed to continue, it will have a strong dampening effect on developers wanting to participate in the City’s required brownfield intensification efforts.

Kensington Properties had a \$25m apartment development ready to receive Resource Consent at 11-13 Taranaki St, Kohimarama, in 2005. All of the RC issues had finally been resolved, except for Metrowater. What eventually transpired was Metrowater had an existing problem with their stormwater pipe network about 200m downstream in Melanesia Rd, and Metrowater was trying to get Kensington to pay \$200-250,000 to fix their existing stormwater pipe replacement. A stand off continued for 6-8 weeks, we had builders ready to start on site, and Metrowater was effectively black-mailing us to pay up or you won’t get our approval for your consent. Some high level intervention followed, and finally Metrowater accepted that we provide our own on site stormwater detention, at a cost of about \$25,000 to us. Large developments have large holding costs, infrastructure companies know this and try and use delaying tactics to their advantage. For infrastructure companies to use delaying tactics on developers, effectively black-mailing them to try and get them to pay for fixing their clapped out infrastructure is morally and ethically shameful.

It’s very clear, communities should pay to fix their own passed used by date infrastructure.

9.2 Upgraded or new infrastructure that will make a community more prosperous

When new infrastructure is considered desirable within an existing community, it should be the existing overall community that pays.

An exception to this could be a run-down area that is to be rejuvenated, which will then likely attract new development to the area. The Wynyard Wharf and Wynyard Quarter development area is such an example. The Viaduct Basin redevelopment in the late 1990's was a similar example.

In these instances the existing overall community should pay for overall community upgrades. However when a specific precinct area is going to get substantial upgrades a specific levy should be payable by the occupiers of the specific precinct, or a specific development levy charged to parties developing in that area. The Queen St upgrades 7-8 years ago were paid by a specific Levy to Queen St businesses, and when they saw the improvements being made, were content to pay for the improvements.

9.3 New existing urban area infrastructure that is clearly required because of increased demand from extra residents

It is fair that new development pays for new infrastructure clearly required because of intensification development. This should be in the form of a levy, but all costs needs to be spread out within the neighbourhood that is receiving extra development.

The infrastructure provider should produce a Regional schedule, which states all of the infrastructure that is required to cope with residential intensification over a 10-30 year period, with costing estimates. This will then highlight the stormwater, sewer, water, etc levies that are payable, which can be apportioned to each extra development unit intended. A developer can budget for the costs (on a per unit basis) when contemplating a new development.

Whether this is by street block (mesh-block) v precinct v neighbourhood v Board area v Auckland wide is for others to decide / consider. However we need to avoid Utility companies trying to charge developers to upgrade something in a street and if you don't, we will not give you a consent. (as the example provided in Section 9.1)

9.4 New greenfield infrastructure, catering for greenfield development

Now this is the section that we should place greatest energy into. The new infrastructure investment required will be large, and obviously the existing community should not be required to pay for greenfield expansion infrastructure.

So who should pay for the infrastructure, how should this be paid for and what will the resultant effects on property prices be?

The options on who should pay include:

1. The existing rural land-owner
2. The land developer / subdivider (as current)
3. The build out developer
4. The house builder
5. The new household occupier

We need to go back to Square 1 and consider all the infrastructure that is required for greenfield development, and the impact on land values of the re-zoning of land from rural to residential.

What infrastructure is actually required for green-field housing, say for a specific RUB area?

1. Infrastructure within each subdivision development area:
 - a. A roading network within the subdivision area, built to public road standard.
 - b. Localised water supply distribution, stormwater piping, sewerage piping etc
2. Infrastructure away from specific subdivisions, but directly related to the new growth:
 - a. Water treatment plants, so that sufficient new clean water can be provided.
 - b. Stormwater systems, pipes or open areas, within the wider RUB area.
 - c. Sewerage treatment plants (only to cater for the new growth, not enhancements to existing systems or water-sewer separation projects).
 - d. Providing new roads to get to each subdivision or to upgrade the existing roading network, to cope with the increased traffic.
 - e. Parks and Reserves, both passive and active open space.

Its pretty straight forward that a greenfield land developer should pay for the internal costs of transporting water, stormwater, sewerage etc, within his own development. All localized roading (within their development) is their cost also. (i.e. costs 1a. and 1b.).

All of the costs of the new infrastructure created directly due to new greenfield housing, should be paid for by the new development, through the imposition of development levies.

Substantial effort should go into assessing the full actual costs of the new infrastructure that is required for new greenfield development, within each of the RUB areas. (i.e. costs 2a. to 2e.). When these costs have been determined, there should be a clearly published table which sets out what all the new infrastructure costs will be for each RUB area.

How to apply the development levies to each new household will be considered in more detail in section 10.3.

9.5 New regional strategic infrastructure, providing region wide benefits

Regional transport infrastructure has generally been paid for by central government, especially roading. Who funds the costs of new public transport infrastructure has been debated at length between central and local governments. Further region wide infrastructure can be new regionally significant parks, those traditionally purchased by the ARC.

The costs of the new region wide infrastructure should be borne by the entire region. There therefore needs to be a clear de-lineation between infrastructure provided solely due to the new greenfield housing, i.e. suburban infrastructure and region wide infrastructure.

The new development should pay for the suburban infrastructure. Whether central or local government pays for the new region wide infrastructure is not directly relevant for new greenfield housing, as long as the costs are not levied on the new greenfield development.

10.0 Tools to be Utilised to Unlock Future Development Land

This section will consider a series of tools that will assist in unlocking affordable greenfield and brownfield development land:

Tool 1:

Releasing sufficient greenfield land, such that greenfield sections can be provided at a substantially lower price than the current \$300,000; targeting \$100,000 section prices.

Tool 2:

A tool that will aim to ensure that greenfield and brownfield land is made available in the Council desired growth locations, when it is required.

Tool 3:

A tool to stop super-profits being collected by land owners who are the beneficiaries of rezoning of their land from rural to urban.

Each of the tools provided below are in a very preliminary concept development stage. These tools will need substantial further development to enhance their detail and to realize their full potential. SD4 recommends that Auckland Council and Central Government set up Committees to consider the full implications of the opportunities and pitfalls of each tool, to ensure the intended outcomes are provided, and the unintended consequences are minimized.

10.1 Tool 1: Providing sufficient greenfield sections, starting at a price of \$80-120,000

Section 6.4 highlighted that if a residential section of 300m² could be provided for \$100,000 (excl GST), then a 3 bedroom 120m² house could be provided and sold for \$400,000 inc GST

For 300m² sections and at a 70-75% net site area per gross hectare of raw land, we could get approx. 24 houses onto each hectare, or R24. If we now considered duplex housing on sections of 200m², we could get 36 houses per hectare, or R36.

To achieve the \$400,000 target price, we should (for now) focus on the duplex typology and try and get 36 sections per raw hectare, for \$100,000 each (excl GST). Working backwards the following cost structure would need to apply:

For 36 sections at \$100,000 each, the total serviced land cost per hectare has to be \$3.6m.

The land developer has to provide the site bulk earthworks, roading, footpaths, services etc. With a greater density per hectare (R36), the land developer will need to be able to provide all of the above for approx \$35,000 per section, or \$1.26m total. (this is slightly lower than the current \$40-50,000 cost per section as we are getting more sections per hectare).

Lets assume for now that the Council will require a \$10,000 development levy and the land subdivider a \$10,000 margin per section and he requires a contingency of \$5,000 per section.

Finally lets assume that to reduce land holding costs, all the 36 houses are built at the same time (providing labour and trades efficiency), the overall build costs could be reduced. In the US, this is called "Tract" house building. The developer would buy the sections in bulk on "builders terms", minimizing holding costs and the land developers sales and marketing costs.

If we now consider all of the above, the following costs apply:

Site bulk earthworks, roading, footpaths, service etc:	\$35,000
Council development levy	\$10,000
Land development contingency	\$5,000
Land subdivider margin	\$10,000

The above costs total \$60,000, so to provide a \$100,000 section to a Tract house builder, would require a raw land cost of a maximum of \$40,000 per section. For the 36 sections per hectare, a total max cost 36 x \$40,000 or \$1.44m per hectare. This is a raw land price of \$144/m².

The above is based on “builders terms”, therefore no holding costs and a very efficient tract house building process. If there is an advance land payment required, necessitating holding costs, the raw land cost would have to reduce further.

Section 6.4 of this report, showed that if a serviced section, ready to build on, could be provided for \$100,000 (excl GST), then 120m² 3 bedroom houses could be provided and available for sale at prices of \$400,000 (incl GST).

So to get section prices of \$100,000 per section, a land developer (or tract house builder), needs to be able to buy suitably zoned raw land for approx. \$100-140/m².

So if we keep the maths nice and simple:

Auckland Council and Central Government should target sufficient residential zoned raw land being available to land developers and tract house builders at all times, at prices of \$100/m², or \$1m per hectare. At these prices it is possible to provide new greenfield housing at \$400,000 per dwelling!

How realistic is this?

It is very straight forward. The Hingaia peninsula is recognized as one of the most likely areas to be re-zoned from rural to urban. Large parts of the peninsula are already urban and are within the MUL, and the peninsula has received the recent benefit of a major motorway upgrade. Even taking account of this likely pending upzoning, capital values (as shown on CV data) of rural properties within the peninsula are still well below \$100/m² of land area (the outside of the MUL portions of Hingaia, have current CV's of \$10-30 / m²). In recent MUL times, it has been at the time of the zoning change, that the biggest value uplift has occurred.

Tool 1 is for Auckland Council to ensure sufficient land is zoned urban residential, ensuring that the supply and demand of land is in balance, such that when the raw land is supplied to the land developer, or land subdivider, it is at a cost no greater than \$1m per hectare.

Over the next few years, there needs to be sufficient greenfield land released, so that supply has the chance of catching up with demand. This may require a fairly substantive initial release of land, to effect the “catch up”. During the last 15 years, the land speculator has clearly benefitted from “just waiting”, as land values have kept rising with minimal supply, and the rates being levied have not sufficiently encouraged the land owner to seek a better and higher value use for the property.

That brings us to the second tool, a tool to encourage owners of brownfield and greenfield development land to make their property available for its intended re-development use, in a timely manner.

10.2 Tool 2: A Council Rates regime that encourages land owners to make their property available for development

This is likely to be a highly contentious topic, but it needs to be done. When Council has provided a substantial amount of infrastructure to enable development within a neighbourhood, to ensure that sufficient brownfield and greenfield land is made available for development by the existing land owners, there is a need to apply a Council Rates regime that progressively increases the rates on development sites, so as to encourage the owner to either redevelop or sell the site. There would likely need to be some exemptions for sitting current owners, we'll discuss this later in the report.

So lets look at the issues.

The property market determines that a particular neighbourhood is market attractive and is prime for redevelopment. The Unitary Plan has substantially up-zoned the area with the intention that either greenfield or brownfield development will take place. Council and the Infrastructure providers prepare for spending (say) \$500m of infrastructure upgrades, in part to improve the urban amenity for existing occupiers, but also to provide extra infrastructure for the expected increase in residents.

International experience has shown that existing residents of brownfield urban regeneration areas will be able to achieve more for their existing house, relative to other similar areas not being up-zoned. Again it is simple Economics 101: Provide an extra pool of buyers (developers looking for land) to an existing community where the supply-demand dynamics are otherwise stable, and the demand will quickly exceed the supply and prices will rise. Due to the up-zoning, the new buyers (developers) can afford to pay more than the earlier existing use value of the land and buildings. Whenever an older house with land becomes available for sale within a neighbourhood, there will normally be developers ready to buy the property.

This very simple explanation needs to be communicated far more clearly by Council when discussing up-zoning and in dealing with NIMBY's. Having dealt on a professional basis with hundreds of neighbours on land adjoining our development properties over a 15 year period, SD4 can categorically state that the main underlying concern that NIMBY's have is "what will this 'change or development' have on the value of my property"? Most NIMBY's will not publically come out with this simple fact, but it is often the underlying root cause of their discontent.

So if the underlying value of the greenfield or brownfield property is likely to rise in a re-zoning, land owners are not likely to lose financially in an on-sale position.

So getting to the crux of the issue. Increasing the rates in a graduated manner to "encourage" existing owners to vacate their development sites. This will be highly unpopular with existing owners, and especially the income constrained elderly. The dramatic increase in rates for development sites will not concern the developer, as he will likely re-develop the site quickly to it's higher value use. This can apply to both greenfield and brownfield.

To soothe the burden on the existing residents, there needs to be some initial exemptions, say something along the lines of:

- Current homeowners at the time of the new rating regime are exempt for 5 years
- After 5 years, current homeowners have a stepped introduction of increase in years 5-10.
- There may need to be further exemption for the elderly, however the counter effect needs to be considered, where re-zoning has taken place and where large infrastructure \$ have been provided, these areas need to have development sites made available.

All new owners of the “development site” properties, will have to pay the higher rates immediately, after Title transfer. This will clearly send a signal that these sites are intended for re-development.

The aim is to “encourage” existing owners to vacate development sites that the Council and the community have invested substantial infrastructure around. The up-zoning will provide increased sale prices that will enable the property owner to find more suitable property, not (or less) effected by the redevelopment potential of the site.

10.3 Tool 3: Development levies or contributions to directly pay for new infrastructure

Section 10.1 above considers that for sections of \$100,000 to be available, development levies (covering the cost of all infrastructure outside of the immediate site boundary) per greenfield section should be no more than \$10,000. SD4 is aware that Auckland Council is investigating the real costs of infrastructure for greenfield land development.

The infrastructure costs directly attributed to new greenfield RUB housing need to be factored into the raw land cost that a land developer has to pay.

What development levies are required to be paid for each new property, specific to each particular RUB area, therefore becomes extremely important to understand. If development levies payable for each greenfield section were to be more than \$10,000 per unit, then this needs to be sign-posted from the outset, so that the development levy cost component becomes a very clear consideration at the time the raw land is sold to a land subdivider or land developer.

We also need to differentiate between what type of household units are being created, and what development levies are payable. Clearly a six bedroom six bathroom house will have a greater demand on new services / infrastructure than a 2 bedroom terrace home.

The infrastructure development levy therefore needs to have a fixed per unit cost, and a variable cost relating to the actual demand each property will place on the infrastructure. The variable levy component can be considered as one of or a combination of the following:

- Cost per m2 of household
- Cost per bedroom provided
- Cost per bathroom or toilet provided

The variable component of the development levy will thus provide for a lower development levy for a 2 bedroom terrace home, relative to a 5-6 bedroom house.

If the infrastructure costs are more for one RUB area relative to another, these costs should be clearly signposted and then should be factored into the raw land costs that the land developer pays for the raw land.

Section 10.1 above considered that to provide for \$400,000 new greenfield houses, there needed to be a supply of 250-300 m2 serviced, ready to build on sections for \$100,000, after the costs of development levies had been factored in. This made an allowance of \$10,000 Council development levy for the 120m2 three bedroom house. The raw land cost to the land developer then needed to be no more than \$1m per hectare.

If the development levy was to be increased beyond \$10,000 per three bedroom 120m2 house, this will clearly add cost to the serviced section. There are only two consequences that

can follow. Either the raw land component has to reduce (i.e. to less than \$1m per hectare, or less than \$100/m²), or the cost of each serviced section will increase, to beyond \$100,000. If the cost of each serviced section was to increase to greater than \$100,000, the ability of a developer or builder providing housing for \$400,000 progressively diminishes.

10.4 Will the tools minimize super profits and enable quick release of SHA RUB land?

During the last 10-15 years, when the scarce resource of land within the MUL is considered, zoned raw land (with no change other than it now being zoned residential) has sold for in excess of \$200/m².

The Yi Haung Trading example at 39 Flat Bush School Rd, highlighted in section 6.2, is even more extreme. Buying 29.45 hectares of land for \$890,000 in 1995 and seeking to re-sell for \$60-80m 18 years later, with no added value, other than waiting for the land to be re-zoned. This equates to a raw land value of approx. \$300/m².

It is imperative for a stable housing market that a very clear message is sent to potential speculators that Council and Central Government will be taking steps to avoid these sort of super profits being made in future.

Tool 1 ensures sufficient land is made available for greenfield housing, so that supply and demand is more closely balanced. This should send a clear signal to potential land speculators, that when there is an increased market demand, before prices rise, the Council will release more greenfield land.

Tool 2 aims to release land for redevelopment, where future growth has been clearly signaled and the infrastructure has or is in the process of being provided. For owners of larger land parcels that are in an area where the land has been upzoned from rural to urban, there should be an increasing Council rates imposition to ensure these properties are made available in a timely fashion. SD4 suggest consideration be made of the factors in section 8.2 of this report. Higher rates should be applied to larger land holdings (factor 1), directly related to the land area and not the improvements (factor 2), and more where the relative land value is greater (factor 3). Tool 2 aims to reduce long term land banking.

Tool 3 applies development levies directly related to the cost of infrastructure for the specific RUB area. There needs to be a very clear signal of what these levies will be so that they can be factored into all the raw land costs a land developer will potentially pay.

One of the fastest ways to get a quick release of SHA RUB land, is to announce that there will a reduction in development levies for a period, but that these will increase again in (say) 4-6 years time.

As SHA land has a key priority of affordable greenfield section release, for the first (say) 10,000 sections provided below a benchmark price of say \$100,000 per section, there will be no or low development levies and no value capture mechanisms. (this was done in Auckland's CBD in the mid-late 1990's with immediate success, as highlighted in section 4.4).

Noting that the Housing Accord is targeting the release and consenting of 39,000 dwelling units (greenfield and brownfield), there will probably be a requirement for at least 20,000 greenfield sections, as part of the SHA. To encourage these 20,000 sections to be made available quickly, after the first 10,000 sections have been provided a reducing "subsidy" may be offered, until the time the 20,000th section is provided and the subsidy has tapered back to zero.

11.0 Priority Areas for Action and Suggestions for Further Areas of Investigation

The following priority areas for action and areas of investigation are recommended by SD4, as a continuation of the foundations laid out within this report.

1. Auckland Council and Central Government need to develop a greater detailed understanding of land-owner behavior in greenfield RUB areas; further develop SD4's land owner categories and carry out detailed case studies. Understanding Appendices 5-7 should be a good start.
2. The initial SHA areas should be identified within the key RUB areas. Council should be well resourced to assist SHA site owners with their master-planning approaches as envisaged by the Housing Accord legislation.
3. There needs to be a far greater understanding of supply – demand and price economics within Councils
4. For Auckland Council to come close to it's Auckland Plan intensification targets, far greater brownfield land up-zoning is required in Auckland where people actually want to live
5. A detailed study is suggested on existing house price values when an area is up-zoned, using NZ and international examples, Use this not for value capture, but to provide better communication to NIMBY's.
6. Auckland Council should consider carrying out a detailed review of the potential of the rating regime suggested in section 10.2. Council should review their previous application in NZ (if any). There will be similar international examples, which should be evaluated and compared for its potential Auckland adaptation.
7. SD4 is aware that Auckland Council has initiated a detailed study of the costs of infrastructure to greenfield developments. SD4 suggests utilizing this information in clearly sign-posting what development levies should be paid in each of the RUB areas. This is then able to be considered by land developers in ascertaining the price to pay for the raw land that they intend to purchase.

12.0 Background Information on the Report's Author

Patrick Fontein was the owner and Managing Director of the Kensington Group of companies from 1995-2008, completing 20 commercial and residential property development projects across NZ, but with a focus on the Auckland market. The Kensington Group companies eventually folded after the BNZ called in Receivers at Kensington Park, Orewa in 2008. Kensington's workload was 50:50 residential and commercial.

The Kensington Group was awarded Property Council national excellence awards for its office and industrial developments, including the 2005 Rider Hunt Property Council Supreme Award, NZ's top development Award, for Harbourside Business Park.

Patrick completed a BE (Civil-Structural) from Auckland University in 1987, and an MBA with 1st Class distinction from the London Open Business School in 1994, majoring in Economics and Corporate Finance.

Patrick was one of the youngest recipients of a Fellowship from the NZ Property Institute in 2005; was awarded the 2006 NZ Property Institute "Industry Award", for vision and leadership in NZ property; was the Auckland President of the Property Council from 2002 to 2004; and the inaugural Chairman of the NZ Green Building Council from 2006 to 2008. Patrick was the property industry representative on the Ministry for the Environment Urban Design Protocol Advisory Board in 2004-2005, which led to the Urban Design Protocol. Patrick was the founding Property Council urban design champion, at the time when the Property Council was a founding signatory to the Urban Design Protocol.

Since the mid 1990's Patrick has been on 30-40 international property development trend study tours, investigating in detail the residential and commercial property development trends that he believes are relevant to Auckland and NZ.

The main areas of relevance to the Auckland market are Australia, and the west coast of America / Canada, and this is where most of the study tours have focused. Parts of Europe, all of North America and parts of Asia are also relevant to NZ property development, and relevant parts of these markets have been studied. These study tours have not been overseas junkets, they have generally involved detailed case studies of specific property developments, and detailed meetings with Councils and the developers involved.

The Regional Growth strategies of the Portland and Vancouver areas are probably of most relevance to Auckland. Their climate has similarities to Auckland (relatively), they have similar size cities, and are also both growing, predominantly from internal migration from within America, and in Vancouver's case a large Asian immigrant influx.

Patrick has had detailed meetings with developers and Councils in Portland and Vancouver in 3 separate visits to each of these cities over a 10 year period, looking at their Regional growth strategies in great detail, how developers have responded in both greenfield and brownfield development. The 2nd and 3rd visits have specifically considered the evolving effect of the Regional Growth strategies on development form / typology, affordability and how the Councils and the development market has responded to market dynamics over the 10 year period.

The experience gained from the international development trend study tours provides part of the context for the developments undertaken by the Kensington Group from 1995 to 2008 and the information contained within this Report.

Since 2009 Patrick has been providing property consultancy services for Studio D4. SD4 clients have included corporate tenants seeking assistance with commercial property developments, land owners seeking assistance with commercial and residential development projects, and central and local government seeking assistance with planning strategy and policies. SD4 has provided substantial property consultancy assistance to Auckland Council during 2011-2013 in its preparation of the Auckland Plan, followed by the Unitary Plan.

Appendix 1: Development Feasibility Cost Apportionments

Greenfield		Target Range	Sale Price (inc GST)	Sale Price (exc GST)	Required Land Cost per Unit	Design Fees	Consent Costs	Build Costs	Marketing & Sales	Project Mgmt	Conting	Funding Costs	Margin	Actual Margin
All costs exclude GST														
			20-35%			4-8%	0.5-2%	35-50%	2.5-3.5%	2-4%	3-5%	3-5%	12-15%	20%
\$300,000	\$260,870	\$78,261	30.0%	\$78,261	6.0%	1.5%	50.0%	3.5%	3.5%	3.5%	4.0%	3.5%	-2.0%	-\$5,217
\$350,000	\$304,348	\$91,304	30.0%	\$91,304	5.6%	1.4%	49.0%	3.5%	3.5%	3.4%	4.0%	3.5%	-0.4%	-\$1,217
\$400,000	\$347,826	\$104,348	30.0%	\$104,348	5.4%	1.3%	48.0%	3.4%	3.4%	3.3%	4.0%	3.5%	1.1%	\$3,826
\$450,000	\$391,304	\$117,391	30.0%	\$117,391	5.2%	1.2%	47.0%	3.4%	3.4%	3.2%	4.0%	3.5%	2.5%	\$9,783
\$500,000	\$434,783	\$130,435	30.0%	\$130,435	5.0%	1.1%	46.0%	3.3%	3.3%	3.1%	4.0%	3.5%	4.0%	\$17,391
\$550,000	\$478,261	\$143,478	30.0%	\$143,478	5.0%	1.0%	45.0%	3.3%	3.3%	3.0%	4.0%	3.5%	5.2%	\$24,870
\$600,000	\$521,739	\$156,522	30.0%	\$156,522	5.0%	1.0%	44.0%	3.2%	3.2%	2.9%	4.0%	3.5%	6.4%	\$33,391
\$650,000	\$565,217	\$169,565	30.0%	\$169,565	5.0%	1.0%	43.0%	3.2%	3.2%	2.8%	4.0%	3.5%	7.5%	\$42,391
\$700,000	\$608,696	\$182,609	30.0%	\$182,609	5.0%	1.0%	42.0%	3.1%	3.1%	2.7%	4.0%	3.5%	8.7%	\$52,957
\$750,000	\$652,174	\$195,652	30.0%	\$195,652	5.0%	1.0%	41.0%	3.1%	3.1%	2.6%	4.0%	3.5%	9.8%	\$63,913
\$800,000	\$695,652	\$208,696	30.0%	\$208,696	5.0%	1.0%	40.0%	3.0%	3.0%	2.5%	4.0%	3.5%	11.0%	\$76,522
All costs exclude GST														
			20-35%			4-8%	0.5-2%	35-50%	2.5-3.5%	2-4%	3-5%	4-8%	12-15%	20%
\$500,000	\$434,783	\$130,435	30.0%	\$130,435	5.0%	1.5%	50.0%	3.5%	3.5%	3.5%	4.0%	5.0%	-2.5%	-\$10,870
\$550,000	\$478,261	\$143,478	30.0%	\$143,478	5.0%	1.4%	49.0%	3.5%	3.5%	3.4%	4.0%	5.0%	-1.3%	-\$6,217
\$600,000	\$521,739	\$156,522	30.0%	\$156,522	5.0%	1.3%	48.0%	3.4%	3.4%	3.3%	4.0%	5.0%	0.0%	\$0
\$650,000	\$565,217	\$169,565	30.0%	\$169,565	5.0%	1.2%	47.0%	3.4%	3.4%	3.2%	4.0%	5.0%	1.2%	\$6,783
\$700,000	\$608,696	\$182,609	30.0%	\$182,609	5.0%	1.1%	46.0%	3.3%	3.3%	3.1%	4.0%	5.0%	2.5%	\$15,217
\$750,000	\$652,174	\$195,652	30.0%	\$195,652	5.0%	1.0%	45.0%	3.3%	3.3%	3.0%	4.0%	5.0%	3.7%	\$24,130
\$800,000	\$695,652	\$208,696	30.0%	\$208,696	5.0%	1.0%	44.0%	3.2%	3.2%	2.9%	4.0%	5.0%	4.9%	\$34,087
\$850,000	\$739,130	\$221,739	30.0%	\$221,739	5.0%	1.0%	43.0%	3.2%	3.2%	2.8%	4.0%	5.0%	6.0%	\$44,348
\$900,000	\$782,609	\$234,783	30.0%	\$234,783	5.0%	1.0%	42.0%	3.1%	3.1%	2.7%	4.0%	5.0%	7.2%	\$56,348
\$950,000	\$826,087	\$247,826	30.0%	\$247,826	5.0%	1.0%	41.0%	3.1%	3.1%	2.6%	4.0%	5.0%	8.3%	\$68,565
\$1,000,000	\$869,565	\$260,870	30.0%	\$260,870	5.0%	1.0%	40.0%	3.0%	3.0%	2.5%	4.0%	5.0%	9.5%	\$82,609
All costs exclude GST														
			12-25%			6-10%	0.5-2%	45-55%	2.5-3.5%	2-4%	3-5%	4-8%	12-15%	20%
\$300,000	\$260,870	\$52,174	20.0%	\$52,174	8.0%	1.5%	56.0%	3.5%	3.5%	3.5%	4.0%	5.0%	-1.5%	-\$3,913
\$350,000	\$304,348	\$60,870	20.0%	\$60,870	8.0%	1.4%	55.5%	3.5%	3.5%	3.4%	4.0%	5.0%	-0.8%	-\$2,435
\$400,000	\$347,826	\$69,565	20.0%	\$69,565	8.0%	1.3%	55.0%	3.4%	3.4%	3.3%	4.0%	5.0%	0.0%	\$0
\$450,000	\$391,304	\$78,261	20.0%	\$78,261	8.0%	1.2%	54.5%	3.4%	3.4%	3.2%	4.0%	5.0%	0.7%	\$2,739
\$500,000	\$434,783	\$86,957	20.0%	\$86,957	8.0%	1.1%	54.0%	3.3%	3.3%	3.1%	4.0%	5.0%	1.5%	\$6,522
\$550,000	\$478,261	\$95,652	20.0%	\$95,652	8.0%	1.0%	53.5%	3.3%	3.3%	3.0%	4.0%	5.0%	2.2%	\$10,522
\$600,000	\$521,739	\$104,348	20.0%	\$104,348	8.0%	1.0%	53.0%	3.2%	3.2%	2.9%	4.0%	5.0%	2.9%	\$15,130
\$650,000	\$565,217	\$113,043	20.0%	\$113,043	8.0%	1.0%	52.5%	3.2%	3.2%	2.8%	4.0%	5.0%	3.5%	\$19,783
\$700,000	\$608,696	\$121,739	20.0%	\$121,739	8.0%	1.0%	52.0%	3.1%	3.1%	2.7%	4.0%	5.0%	4.2%	\$25,565
\$750,000	\$652,174	\$130,435	20.0%	\$130,435	8.0%	1.0%	51.5%	3.1%	3.1%	2.6%	4.0%	5.0%	4.8%	\$31,304
\$800,000	\$695,652	\$139,130	20.0%	\$139,130	8.0%	1.0%	51.0%	3.0%	3.0%	2.5%	4.0%	5.0%	5.5%	\$38,261

Appendix 2: Owner Occupier Categories (in a 2041 Auckland Market)

	Category	Typ. Characteristics	Age	Mkt Size	Growth	Detached	Attached	Lift Aptmts
1	Single Professional	Security Focused	20-40	Moderate	Very High	Min	High	Moderate
2	Single + Flatmates	Price Conscious	20-34	Moderate	High	0	High	Moderate
3	Single + Flatmates	Value Conscious	20-35	Small	Moderate	Low	High	High
4	Couples-DINK'ies	Price Conscious	22-35	Large	High	0	High	High
5	Couples-DINK'ies	Value Conscious	25-40	Moderate	High	Low	High	Moderate
6	Couples-Baby/Toddlers	Price Conscious	28-40	Large	Low	Low	Moderate	Moderate
7	Couples-Baby/Toddlers	Value Conscious	30-45	Moderate	Low	Moderate	Moderate	Moderate
8	Couples-Baby/Toddlers	Quality Focused	30-45	Small	Low	High	Moderate	Low
9	Couples-Kids 2-12	Price Conscious	30-50	Very Large	Moderate	Low	High	Low
10	Couples-Kids 2-12	Value Conscious	30-50	Large	Moderate	Moderate	Moderate	Low
11	Couples-Kids 2-12	Quality Focused	35-50	Moderate	Moderate	High	Moderate	Low
12	Couples-Kids 10-25	Price Conscious	35-60	Very Large	Moderate	Low	High	Low
13	Couples-Kids 10-25	Value Conscious	40-60	Large	Moderate	Moderate	Moderate	Low
14	Couples-Kids 10-25	Quality Focused	40-60	Moderate	Moderate	High	Moderate	Low
15	Solo Parents- 2-12	Price Conscious	30-50	Large	Very High	Low	High	Low
16	Solo Parents- 2-12	Value Conscious	30-50	Moderate	High	Moderate	Moderate	Low
17	Solo Parents- 10-25	Price Conscious	35-60	Large	High	Low	High	Low
18	Solo Parents- 10-25	Value Conscious	35-60	Moderate	Moderate	Moderate	Moderate	Low
19	Single, Middle Age	Price Conscious	40-70	Moderate	High	0	High	Moderate
20	Single, Middle Age	Value Conscious	40-70	Small	Moderate	Min	High	Moderate
21	Empty Nester	Price Conscious	50-75	Very Large	Very High	Min	High	Moderate
22	Empty Nester-DAG	Value Conscious	50-75	Very Large	Very High	Min	Moderate	High
23	Empty Nester-DAG	Quality Focused	50-75	Large	High	Moderate	Moderate	High
24	Empty Nester	Pre Retire 2nd Home	50-65	Low	Moderate	Min	Moderate	Moderate
25	Retirees	Price Conscious	65-85	Large	Very High	Min	Moderate	High
26	Retirees	Value Conscious	65-85	Large	High	Min	Moderate	High
27	Retirees-DAG	Quality Focused	65-85	Moderate	High	Moderate	Moderate	High

Appendix 3: Renter Categories (in a 2041 Auckland Market)

Category	Typ. Characteristics	Age	Mkt Size	Growth	Detached	Attached	Lift Apts
Flatmates							
1 University Students	Price Conscious	18-25	Large	High	Moderate	High	High
2 Houseleavers	Price Conscious	18-30	Large	Moderate	Low	High	High
3 Young Professionals	Price Conscious	22-35	Large	High	Low	High	High
4 Young Professionals	Value Conscious	25-40	Moderate	Moderate	Low	High	Moderate
5 Separated / Single	Price Conscious	30-45	Large	High	Low	High	High
6 Separated / Single	Value Conscious	30-50	Moderate	High	Low	High	Moderate
Single							
7 Separated / Single	Price Conscious	30-70	Large	High	0	High	High
8 Separated / Single	Value Conscious	30-70	Moderate	High	Low	High	High
9 Separated / Single	Quality Focused	30-70	Small	Moderate	Low	High	High
Couples / Families							
10 Solo Parents- 2-12	Price Conscious	30-50	Moderate	High	0	High	Moderate
11 Solo Parents- 2-12	Value Conscious	30-50	Small	Moderate	Low	High	Low
12 Solo Parents- 10-25	Price Conscious	35-60	Moderate	High	0	High	Moderate
13 Solo Parents- 10-25	Value Conscious	35-60	Small	Moderate	Low	High	Low
14 Couples-DINK'ies	Price Conscious	30-50	Very Large	High	0	High	High
15 Couples-DINK'ies	Value Conscious	30-50	Large	Moderate	Low	High	High
16 Couples-Baby/Toddlers	Price Conscious	28-40	Large	High	0	High	Moderate
17 Couples-Baby/Toddlers	Value Conscious	30-45	Moderate	Moderate	Low	High	Moderate
18 Couples-Kids 2-12	Price Conscious	30-50	Large	High	Low	High	Moderate
19 Couples-Kids 2-12	Value Conscious	30-50	Moderate	Moderate	Moderate	High	Low
20 Couples-Kids 10-25	Price Conscious	50-75	Large	High	Low	High	Moderate
21 Couples-Kids 10-25	Value Conscious	50-75	Moderate	Moderate	Moderate	High	Low
22 Company Executives	Quality Focused	35-60	Small	Moderate	High	Moderate	Low
23 Empty Nester	Price Conscious	50-75	Moderate	High	Low	High	Moderate
24 Retirees	Price Conscious	65-85	Moderate	Very High	Low	High	Moderate

Appendix 4: NZ Herald 1st June article on 39 Flatbush School Rd property

NZ Herald 1st June 2013

Land bought in 1995 for \$890,000 — owner will sell for \$112m



Valuable dirt

- 39 Flat Bush School Rd, 29ha, \$112.6m
- 125 Murphys Rd, Flat Bush, 113ha, \$338m
- 21 Flat Bush School Rd, 4.05ha, \$21m
- 63 Murphys Rd, 17.4ha, \$12m
- 245 Murphys Rd, 4ha, \$9.5m

Source: realestate.co.nz

well ahead of millionaire Eric Watson's 37ha \$10 million Westbury estate at Karaka.

Developers say Auckland Council

officials have blamed them for building high-priced houses but they say land speculators take a bigger toll because they are inactive and reap rich rewards for locking land away from being put to productive purposes.

If the Flat Bush land gets the full asking price, then each year the firm has held it, it will have made \$6.2 million for doing nothing, they say.

Mr Hsu said the same vendors also owned 21 Flat Bush School Rd, a 4.05ha block where \$21 million is being sought but \$16 million might be accepted.

Five big blocks of Flat Bush land are being advertised for sale, starting at \$9.5 million.

The undeveloped 29ha at 39 Flat Bush School Rd is close to Sir Barry Curtis Park.

agent Charles Hsu said the owner might accept \$80 million.

"They might drop the price. They understood the asking price is too high," he said of the business, which was established by Taiwanese.

The block could be subdivided into tiny 400sq m parcels, he said, but first, services had to be provided, including a road.

The property listing has left developers fuming. They say land bankers are ruining the city, and the sale will be tax-free because the company has held the land for so long.

The property is being advertised on realestate.co.nz as New Zealand's most expensive piece of real estate,

A land-banking business with a big piece of real estate zoned residential on Auckland's outskirts has made more than \$6 million a year for almost two decades — doing nothing.

QV records show Yi Huang Trading Company owns 39 Flat Bush School Rd, which it bought in 1995 for \$890,000.

Now, this 29ha block is listed on the market for \$112.6 million, promoted as "the land of opportunity, vacant but close to Barry Curtis Park".

Barfoot & Thompson real estate

Appendix 5: SD4 / AC GIS Map: Land Area of each Parcel in the RUB Areas

Appendix 6: SD4 / AC GIS Map: The IV / CV Ratio of each Parcel in the RUB Areas

Appendix 7: Overall Development Potential of each Parcel in the RUB Areas